MEASURING CROP ROOTING

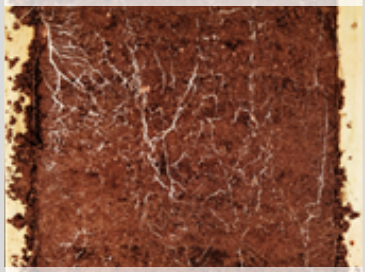
ADAS offers a selection of scientifically rigorous assessment methods, experimental designs, and treatments to measure crop rooting.

OUR ASSESSMENT METHODS

Seedling Root Screening

Controlled environment to measure early root growth of small seeded crops.

Rhizotron System



Soil viewing boxes to compare changes in size and activity of root systems.

Long tubes and pots

Different growing media and watering regimes for measuring crop rooting at later growth stages.

Shovelomics

Assessment of the root system architecture (angle, branching) and anchorage properties for field grown plants.

Root cores from field crops

Measure root length and biomass to 1 m soil depth.

TREATMENTS & EXPERIMENTAL CONDITIONS

- Varietal differences & responses
- Seed treatments, biostimulants & other agrochemical products
- Water regimes (e.g. deficit or waterlogged)
- Disease inoculation (Take-all treatment available for seedling rooting screen)
- Nutrient rates and timings
- Husbandry (e.g. cultivations, seed rates, rotations)

MEASUREMENTS

- Root length density & diameter to as deep as 1 m
- Root biomass
- Root architectural traits (e.g. angle and branching)
- Root anchorage properties
- Crop water use efficiency & transpiration
- Spectral reflectance indices
- Geo-referencing of field samples

CONTACT

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