Root Developmental Responses to Heterogeneous Water and Nitrogen Supply

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This research addresses the relationship between root growth, nitrogen and water supply. The development of a novel experimental system, based on sand and soil culture, enables the flux of water and nitrogen to the root to be manipulated in different parts of the root system. *Arabidopsis thaliana* mutants, root growth analysis, gene expression patterns, ^{15}N uptake experiments, and GFP fusions will be used to provide important targets for improving root nitrogen acquisition efficiency.