

Figure S1: The concentration of root exudate on a line extending away from the artificial root boundary in the open geometry simulation. (a) The accumulation of root exudate over time during exudation and (b) the dilution of the exudate after exudation is stopped.

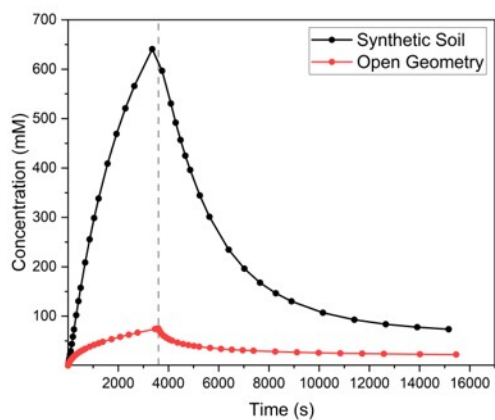


Figure S2: The simulated accumulation of root exudate at a specific coordinate point within a representative hotspot in the synthetic soil geometry (black) and at the same point in the open geometry (red). After 1 hour (dashed grey line), root exudation is stopped and the root exudate diffuses away from the point.

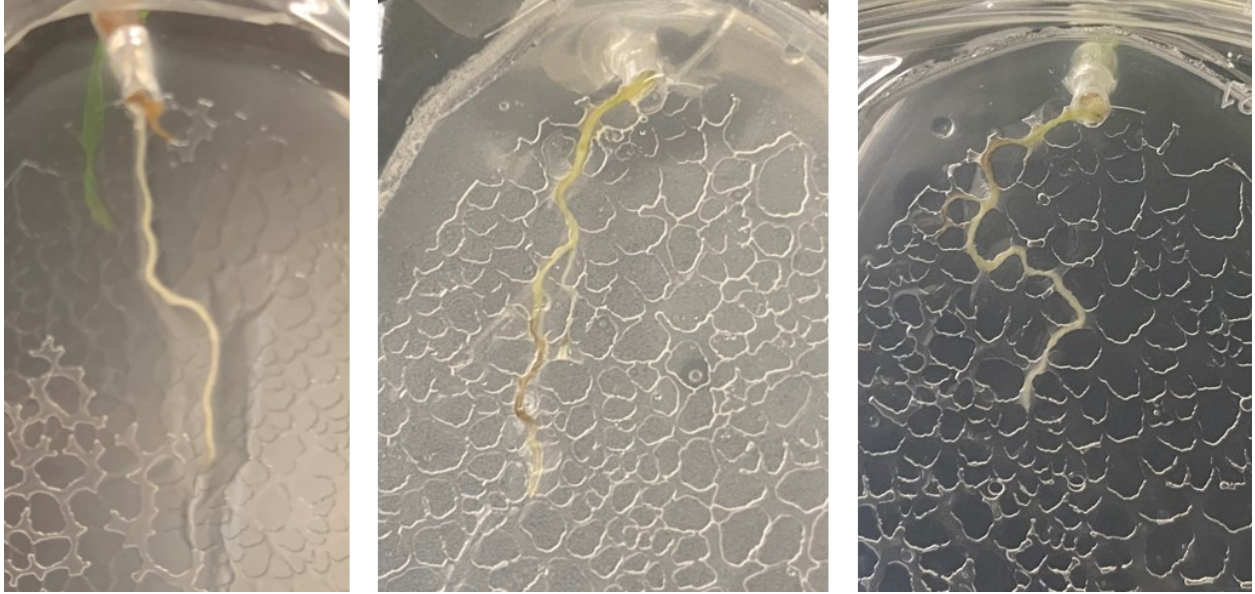


Figure S3: Images through the transparent PETE membranes of the rhizosphere-on-a-chip show the three *Brachypodium* plants that were sampled using LMJ-SSP MS.