SUPPLEMENTARY DATA

Zinc Translocation from Zn-Sufficient to Zn-Deficient Roots as an Adaptation to Heterogeneous Zn Availability

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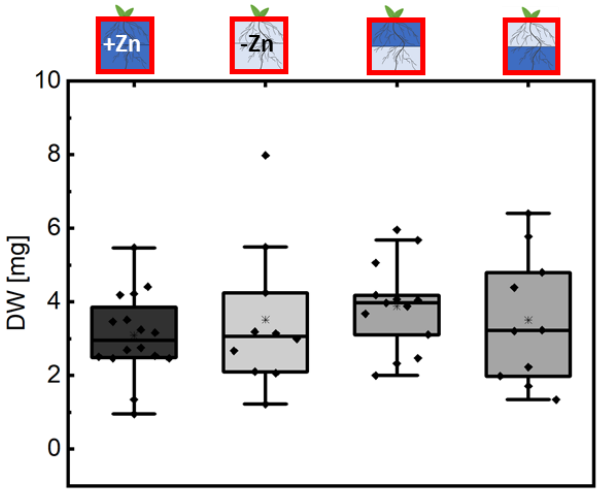
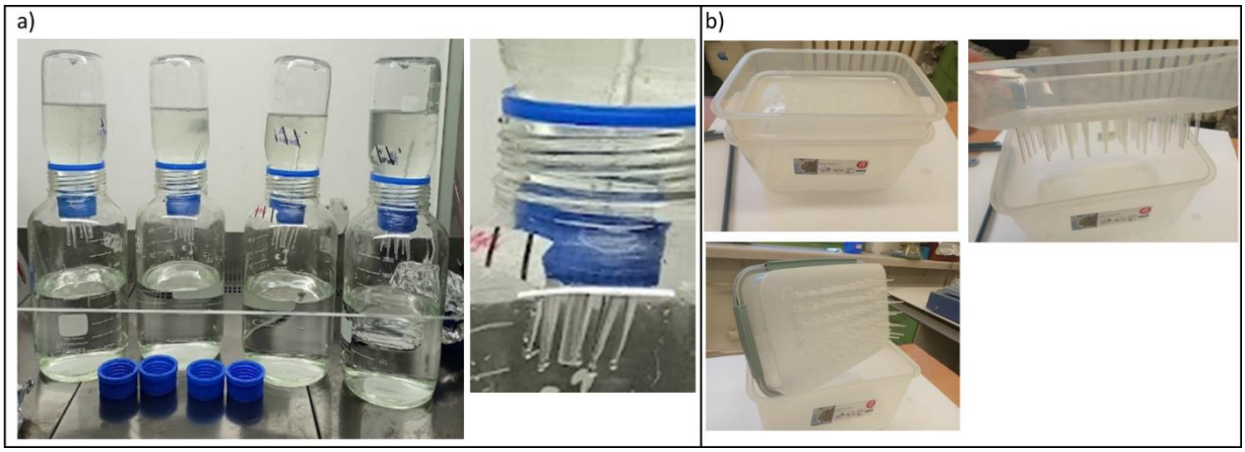


SI Fig 1. Root dry weight from plants grown in medium with homogeneous (1/1 µM Zn; 0/0 µM Zn) or heterogeneous (0/1 µM Zn; 1/0 µM Zn) Zn distribution (sum of upper and lower part). Pictograms above the graph indicate the region of the medium where samples were taken (red rectangles) and the corresponding treatment applied. Dark blue represents Zn-sufficient zones, light blue indicates Zn-deficient zones, and half/half

SI Fig 2. 2-week old plant, before transfer to transparent soil.



SI Fig 2. Sterile high-throughput production of transparent soil: a) using sterile 400ml GL40 bottle with transparent soil polymer mix, in 2L GL80 bottle with 1,2 L crosslinking solution. Screwcap was drilled and up to eight 200µL cut tips with was inserted. The Pauster glass pipet was added for facilitated air intake. b) commercial (Auchan) polypropylene (heat resistant) set made of flat and tall box that fit into each other. Flat box is drilled (up to 60 holes) and 200 µL cut tips are inserted. The choice of system depends on size of autoclave in which system need to be sterilized.

SI Table 1

Primers:

NtZIP4B - *XM_016586154.1*

ZIP4B-Forward: TCTGTTTCCAATATTACCTGC

ZIP4B-Revers: TTCTTGCCAACTAACGGG

NtHMA4 – *both HMAa* (HF937053.1) *and HMAb* (HF675180.1)

NtHMA4-Forward: TCTGTTTCCAATATTACCTGC

NtHMA4 -Revers: TTCTTGCCAACTAACGGG

NtNAS - both tobacco NAS: NAS1 (XM_016633252.1); NAS2 (NM_001326005.1)

NtNAS-Forward: ATCTCGTCTCGTGGCATC

NtNAS-Reverse: TCCTTATCCATACCAACCAACG