Long-term irrigation causes shifts in fine roots and fine root decomposition

(PhD-project SNF, start at 1. Febr. 2014)

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Long-term effects of irrigation: Questions

Roots:

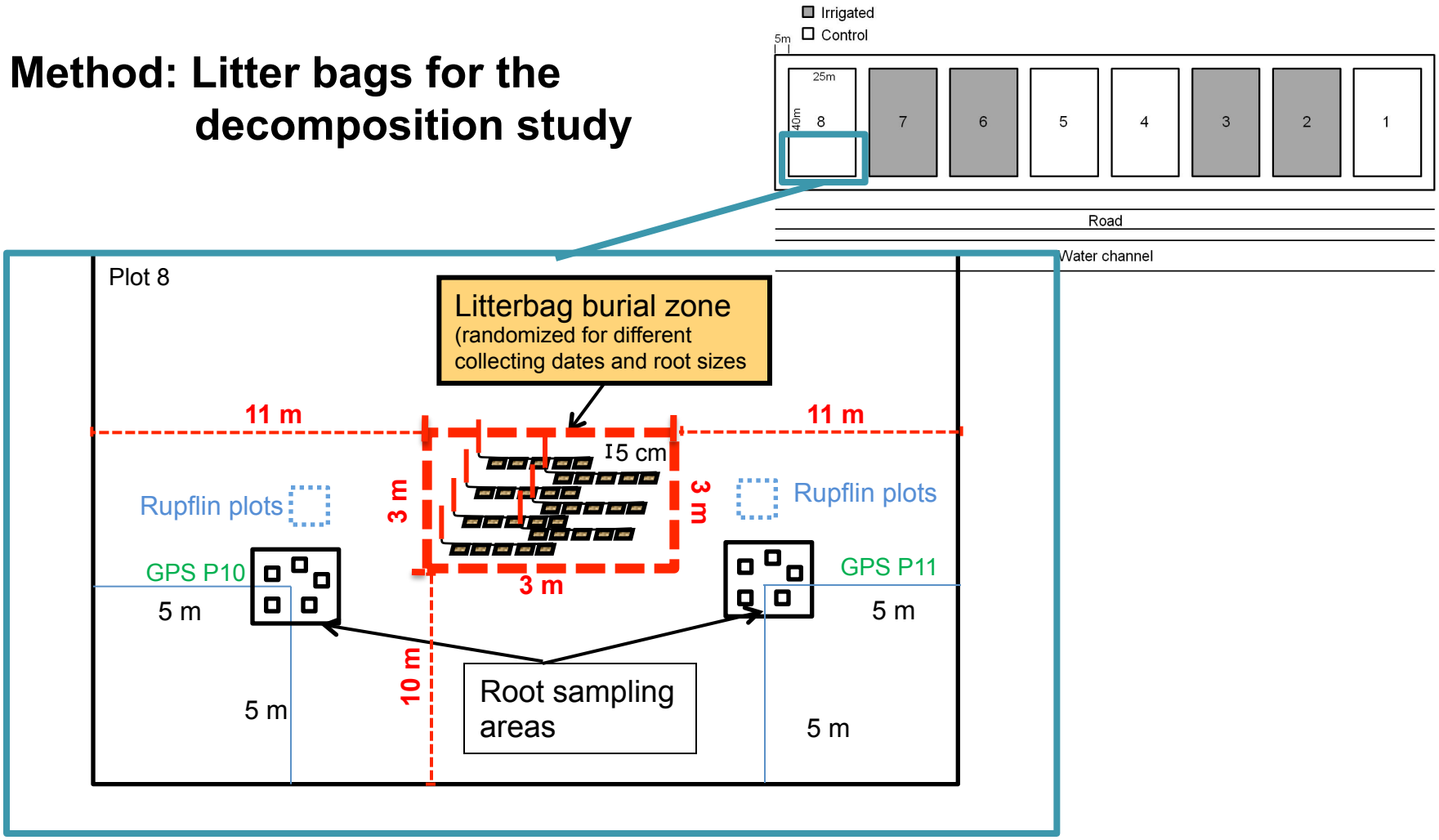
- Is there more fine-root biomass ? ☑
- Do the fine roots have an altered morphologie (SRL, ...) ? ☑
- Do the fine roots have an altered chemistry (C/N, lignin, phenolics, ^{13}C) ? ☑
- Do the fine roots live longer (^{14}C) ? ☑
- Do the roots grow deeper ? ☒

Root decomposition:

- Is there a change in the root-litter quality (lignin monomers) ? ☒
- Is there a change in the microbial composition (fungi, bacteria) ? ☒
- Do specific fungi cause specific decomposition patterns? ☒

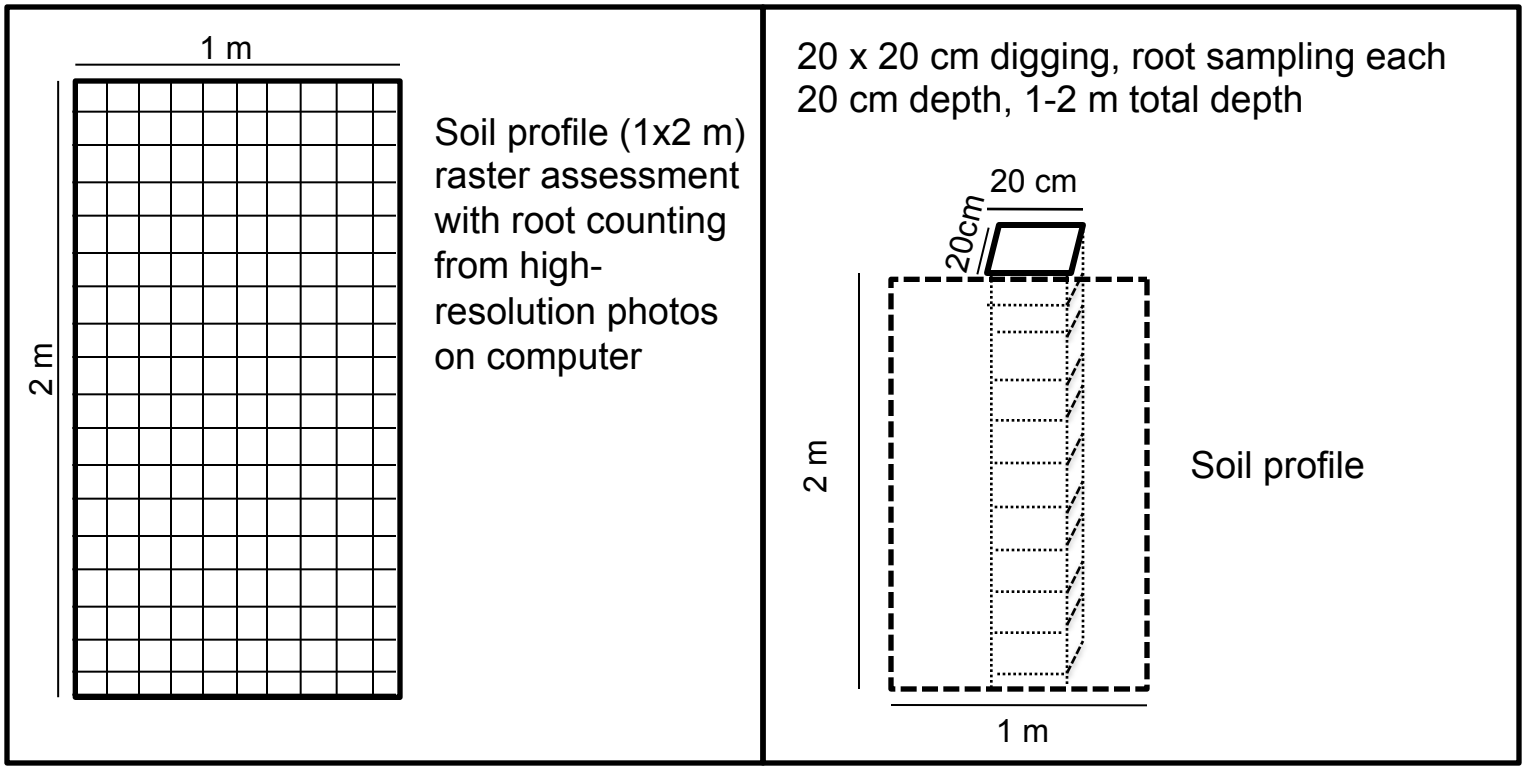
Experimental setup in the field: Root decomposition (in 8 plots)

Method: Litter bags for the decomposition study



Experimental setup in the field: Rooting depth (in 2 plots)

Method: Digging holes and mapping the roots



Fine-root biomass