## **Supplementary Material**

## Diffusive fluxes and water-extractable concentrations of different nitrogen forms in a temperate agricultural soil

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**Supplementary Figure S1** Sampling design used to investigate variations of extractable soil N forms and diffusive fluxes at different spatial scales. Sampling sites (blue circles) were chosen at a distance of 30±5 m between each other (blue lines) and at each site, two microdialysis systems (purple rounded rectangles) were set up with a distance of 3 m between them (purple line). Each microdialysis system was connected to four individual microdialysis probes (black dots) which were installed into soils 0.3 m away from the microdialysis system (red lines). Soil samples for extraction were taken from the very same spots after microdialysis sampling.



**Supplementary Figure S2** Soil N concentrations (left) and diffusive fluxes (right) of nitrate (red bars), ammonium (blue bars) and amino acids (green bars) in an agricultural soils. The position of each diagram corresponds to the position of individual microdialysis systems presented in *Supplementary Figure S1*. Each diagram represents means + SD of four soil samples (soil extracts) or of samples collected by four microdialysis membranes connected to a single microdialysis system.