

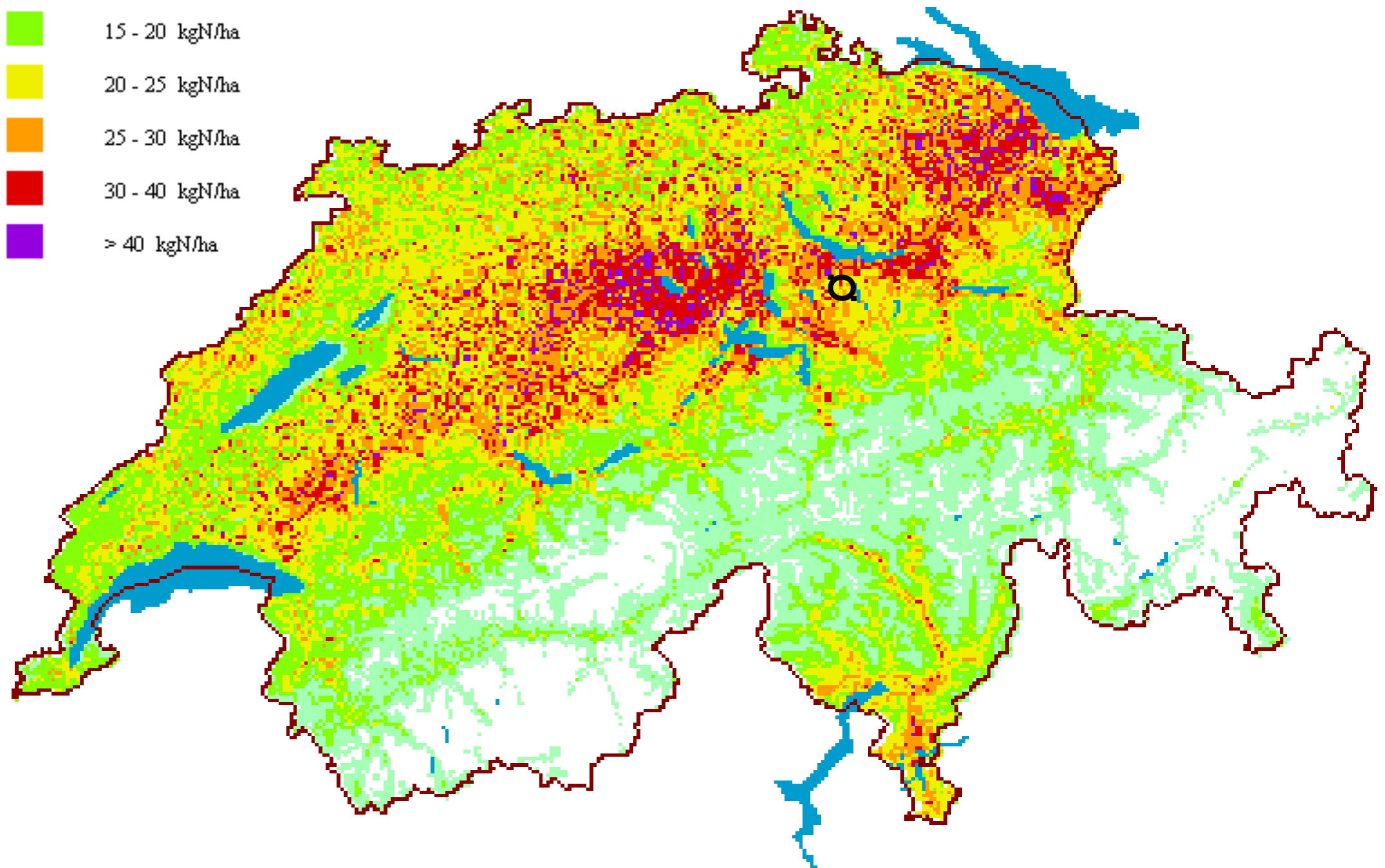
Nitrate leaching from a sub-alpine coniferous forest subjected to experimentally increased N deposition for 20 years, and effects of tree girdling and felling

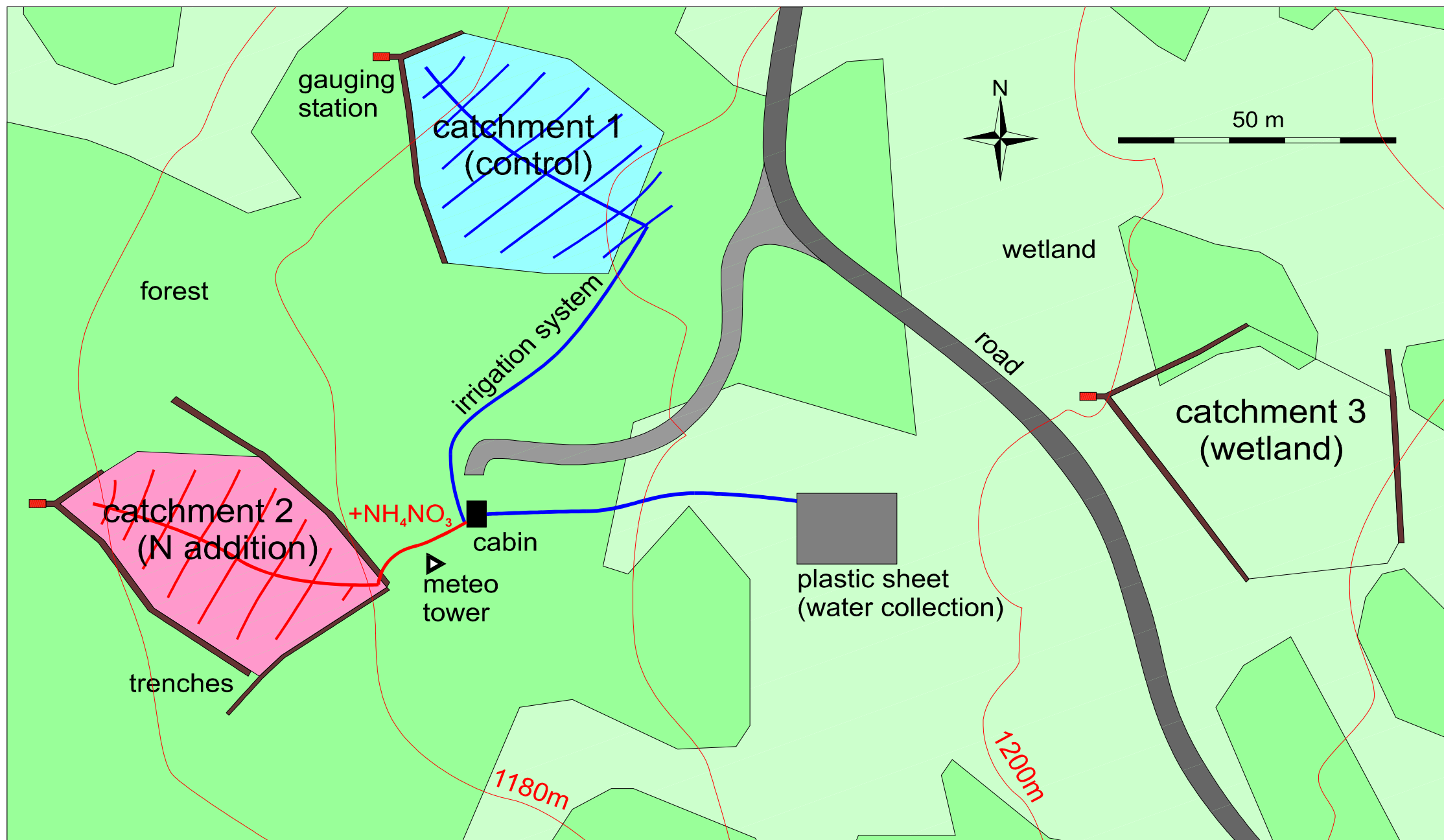
Patrick Schleppi

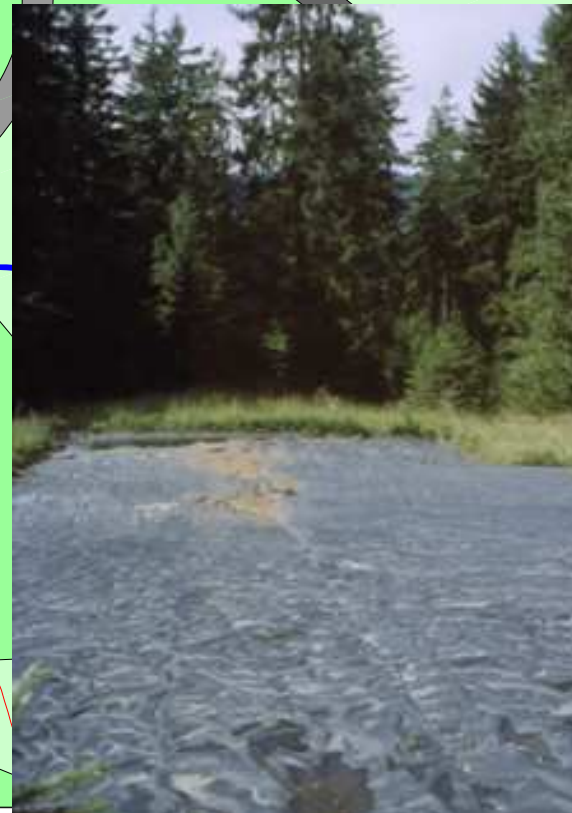
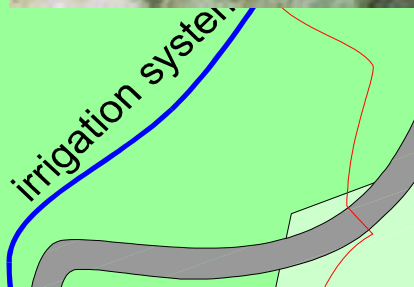
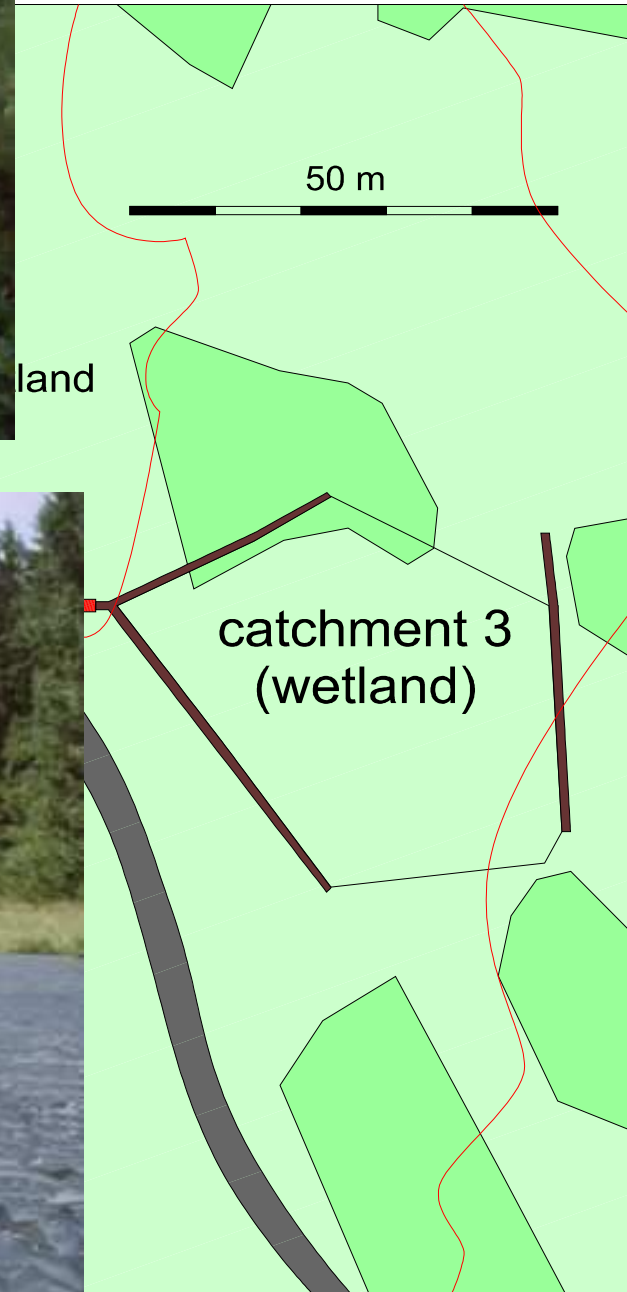
Swiss Federal Institute for Forest, Snow and Landscape Research
(WSL), CH-8903 Birmensdorf



N deposition (1998)









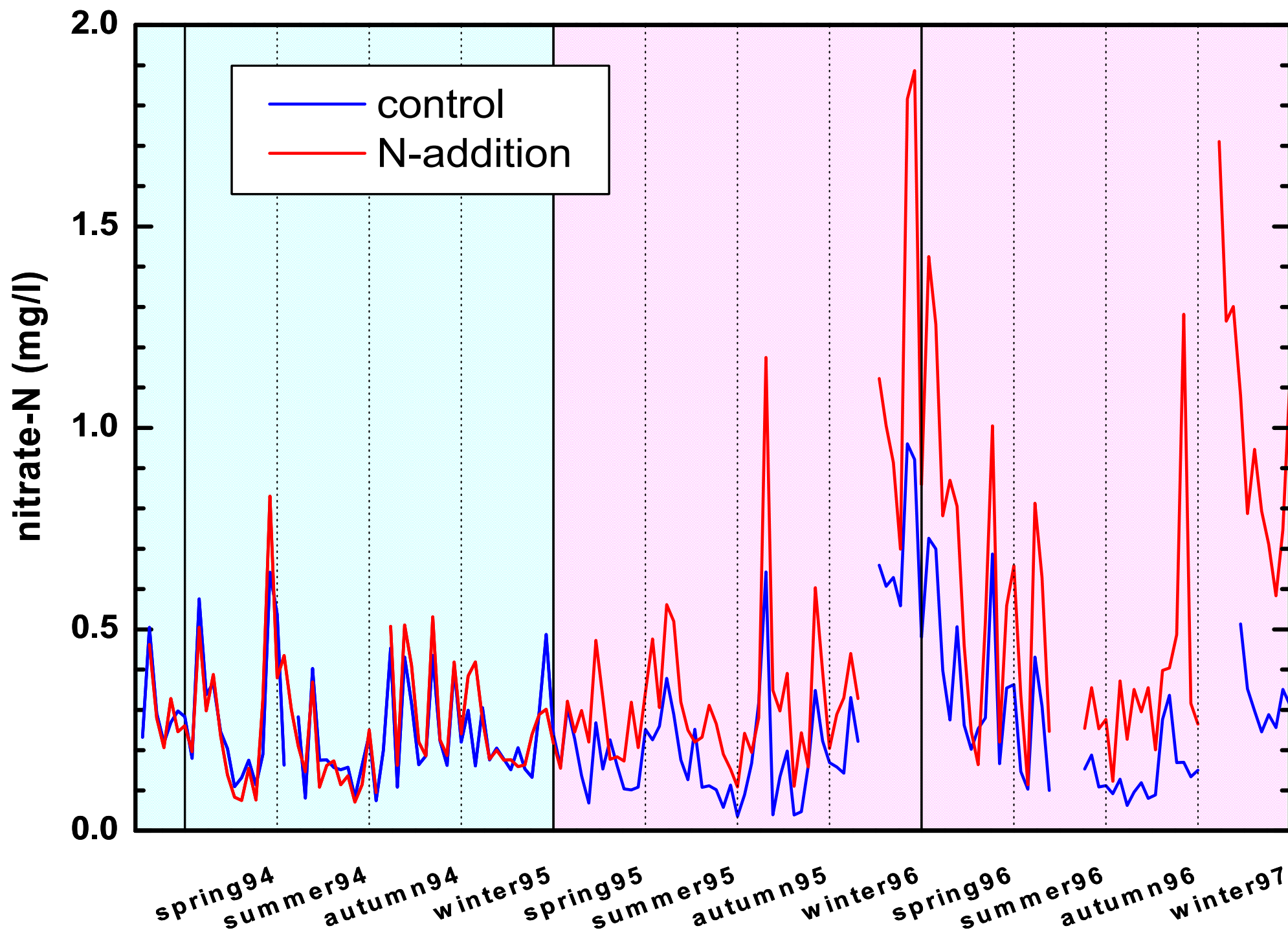
LF

Aa

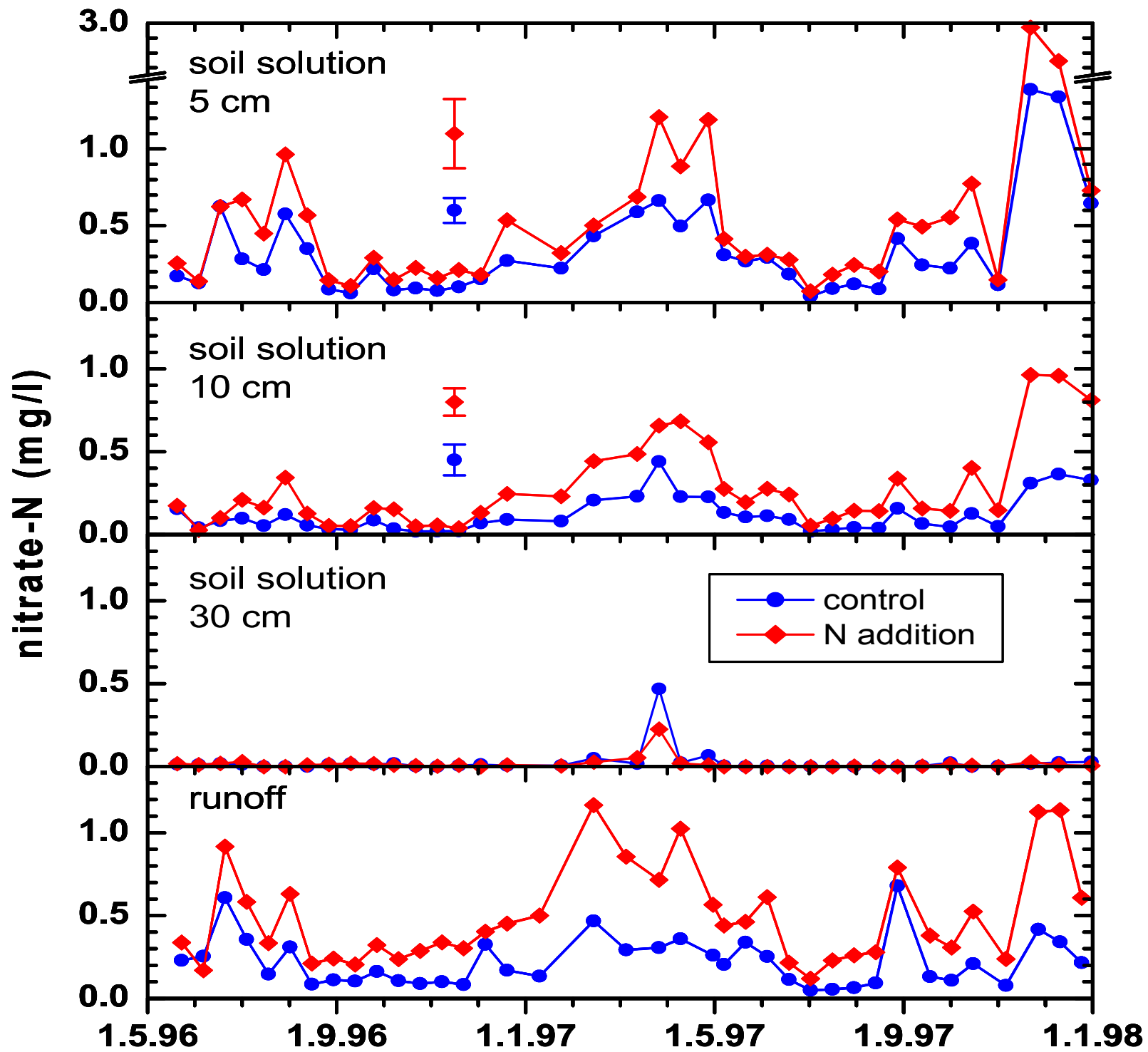
Gor

Gr

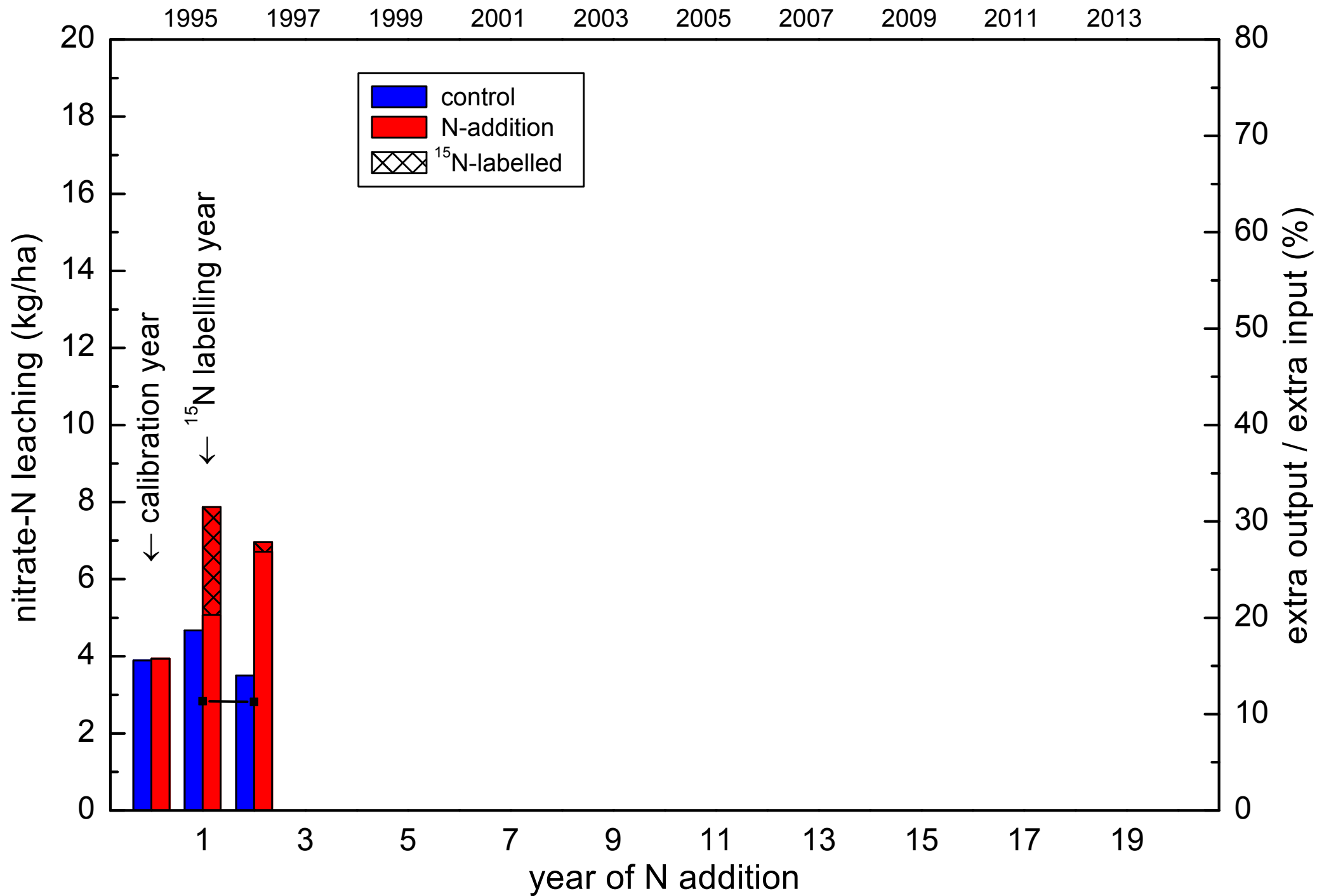
Nitrate leaching: weekly concentrations



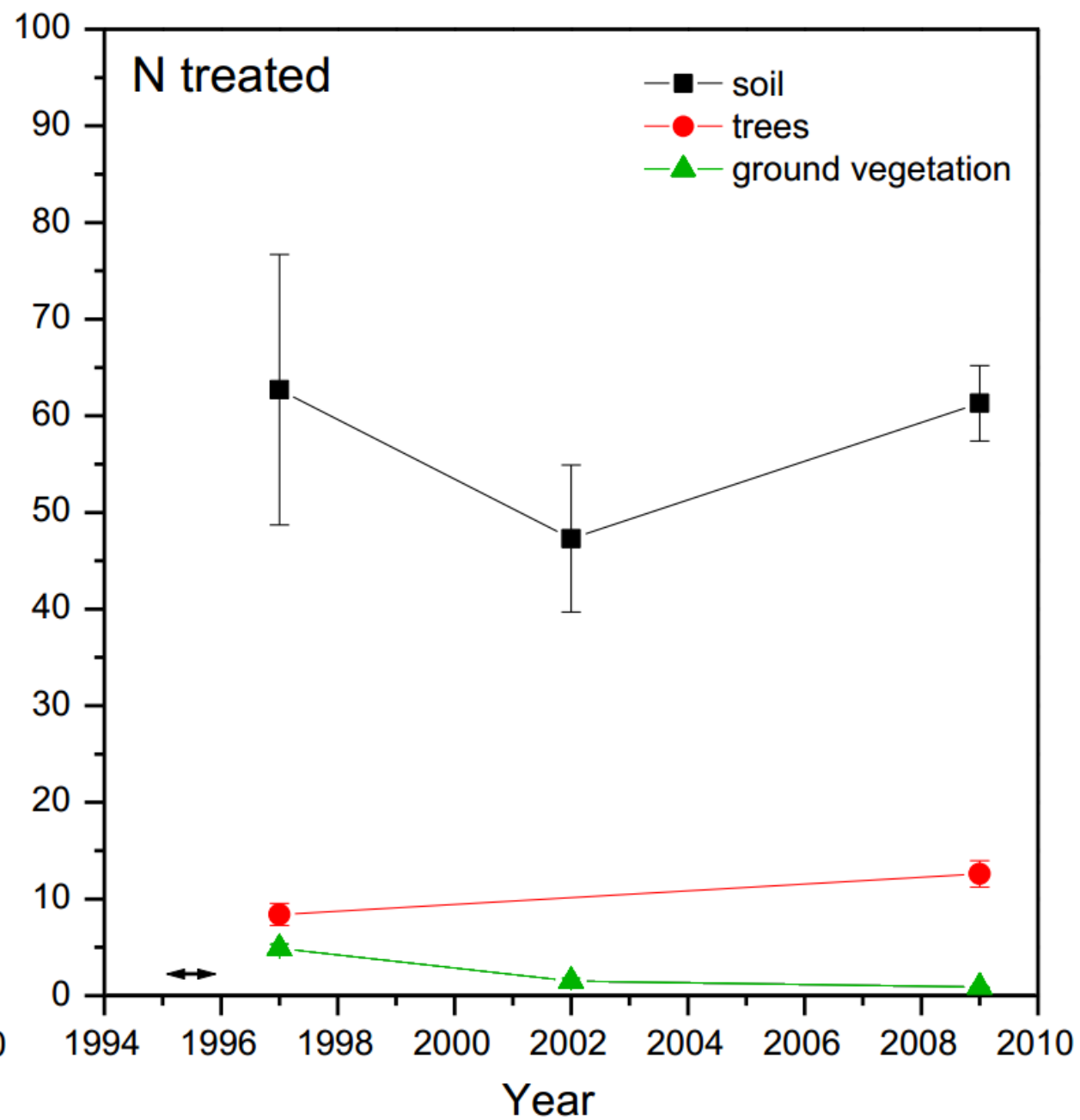
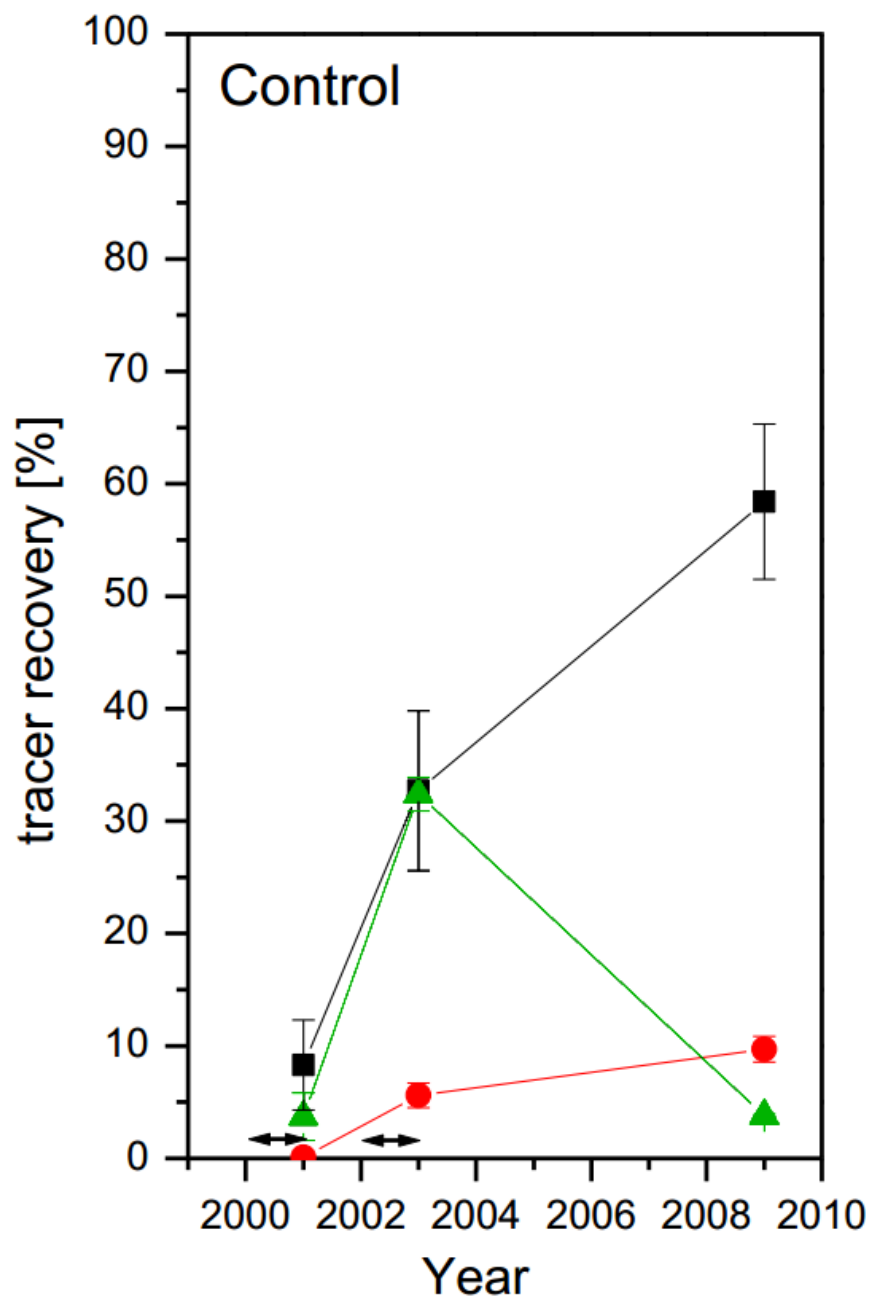
Nitrate in soil solution and in runoff



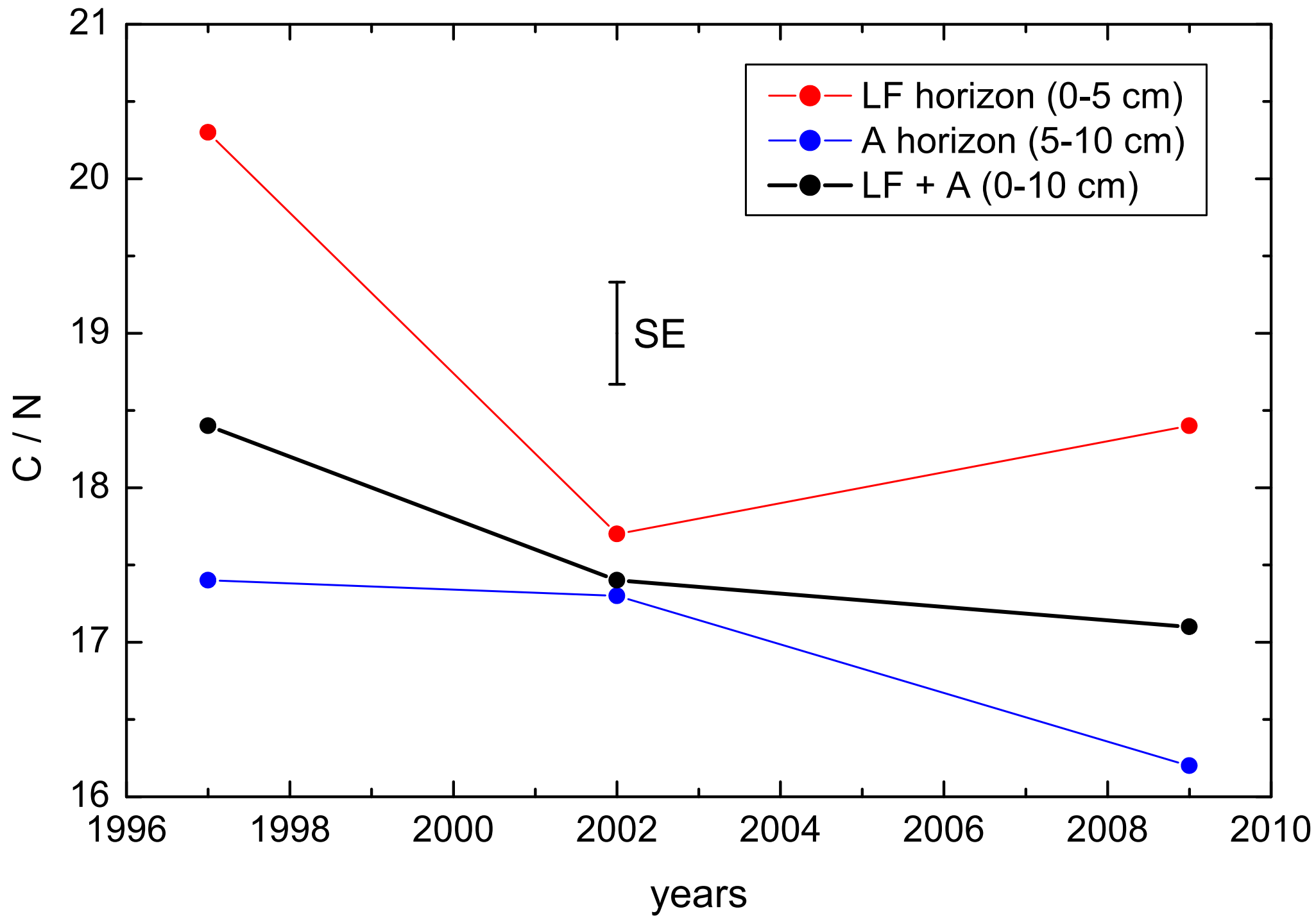
Nitrate leaching



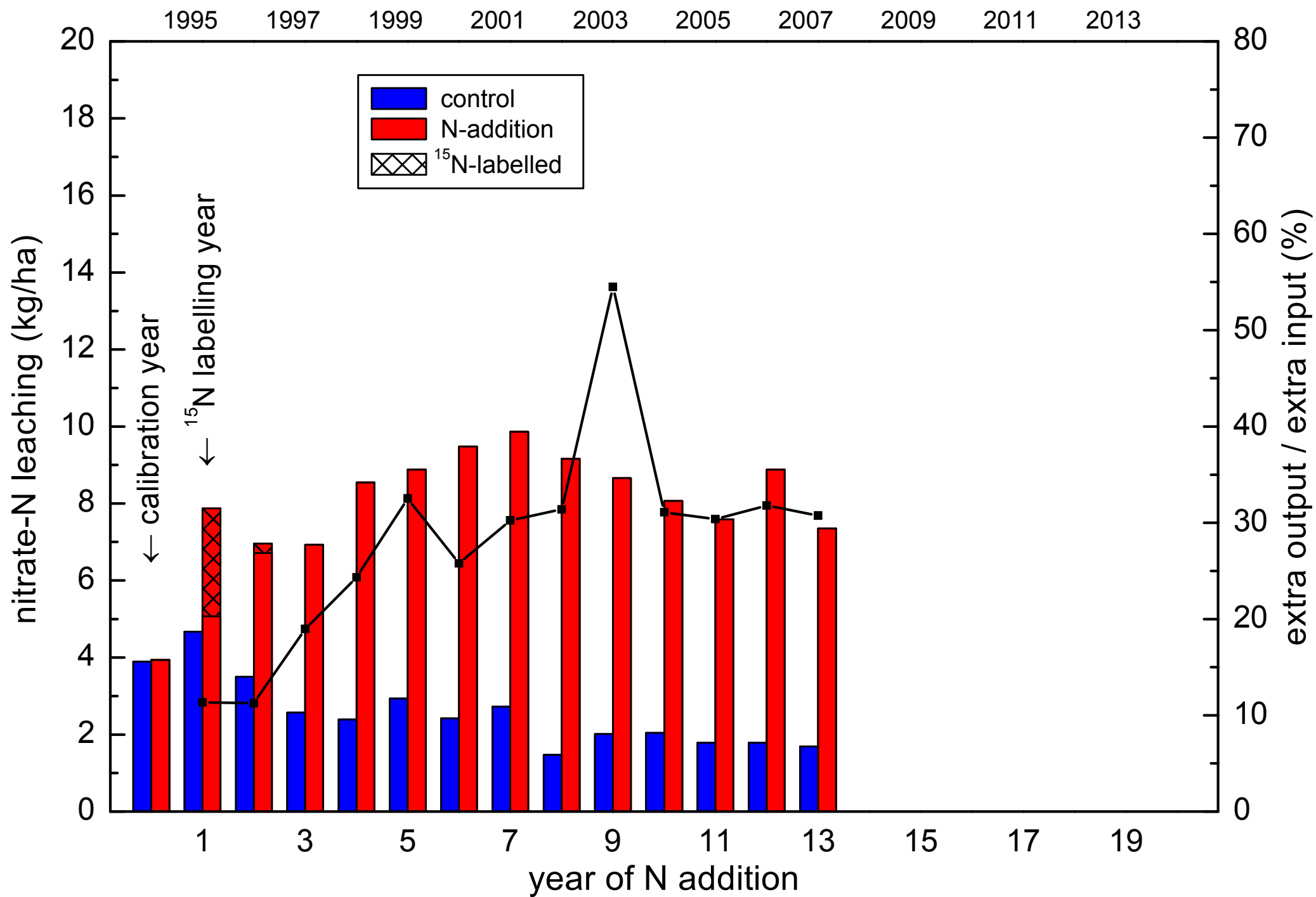
^{15}N recovery over time



C/N ratio in the N-addition catchment



Nitrate leaching



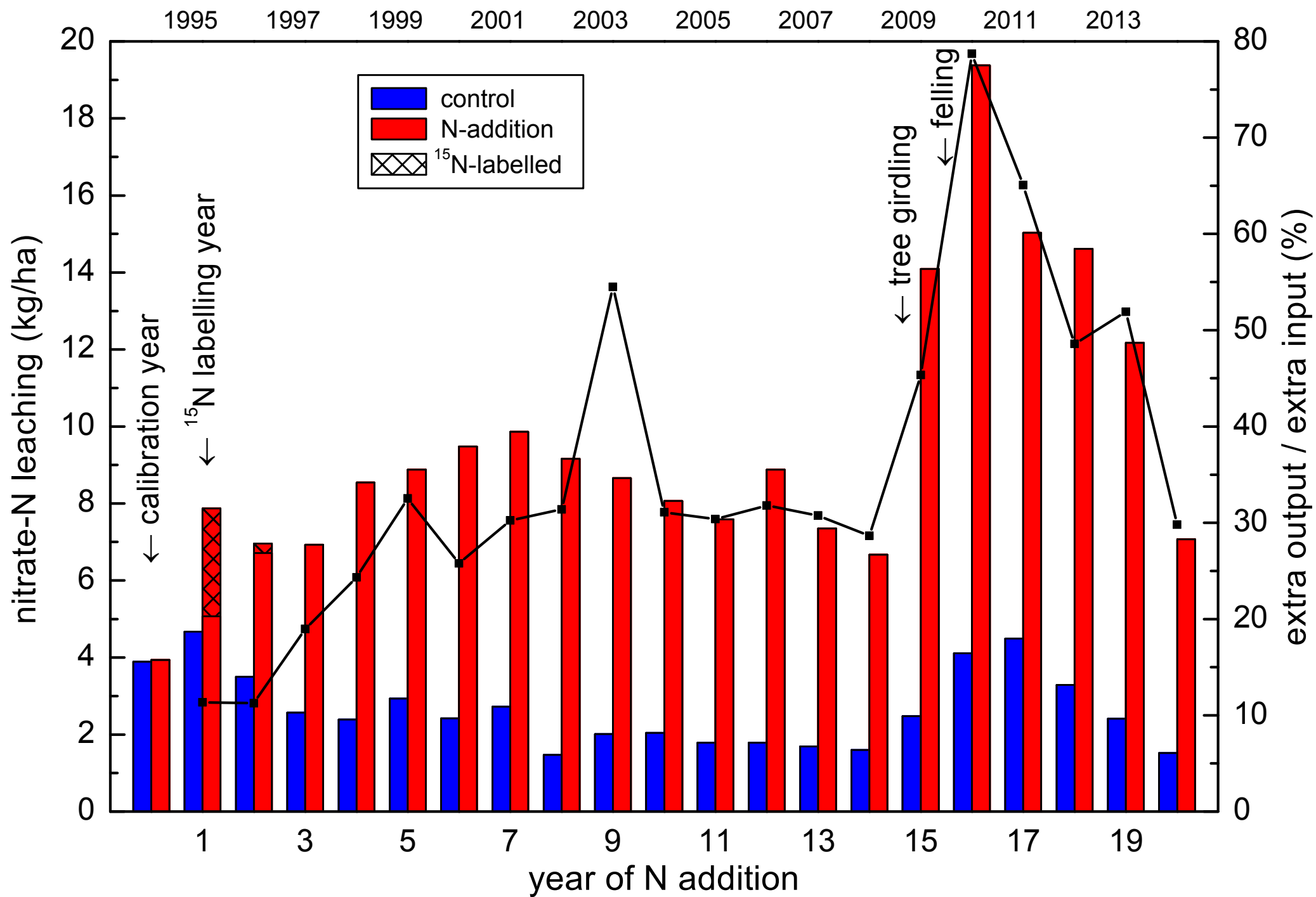
Tree girdling...



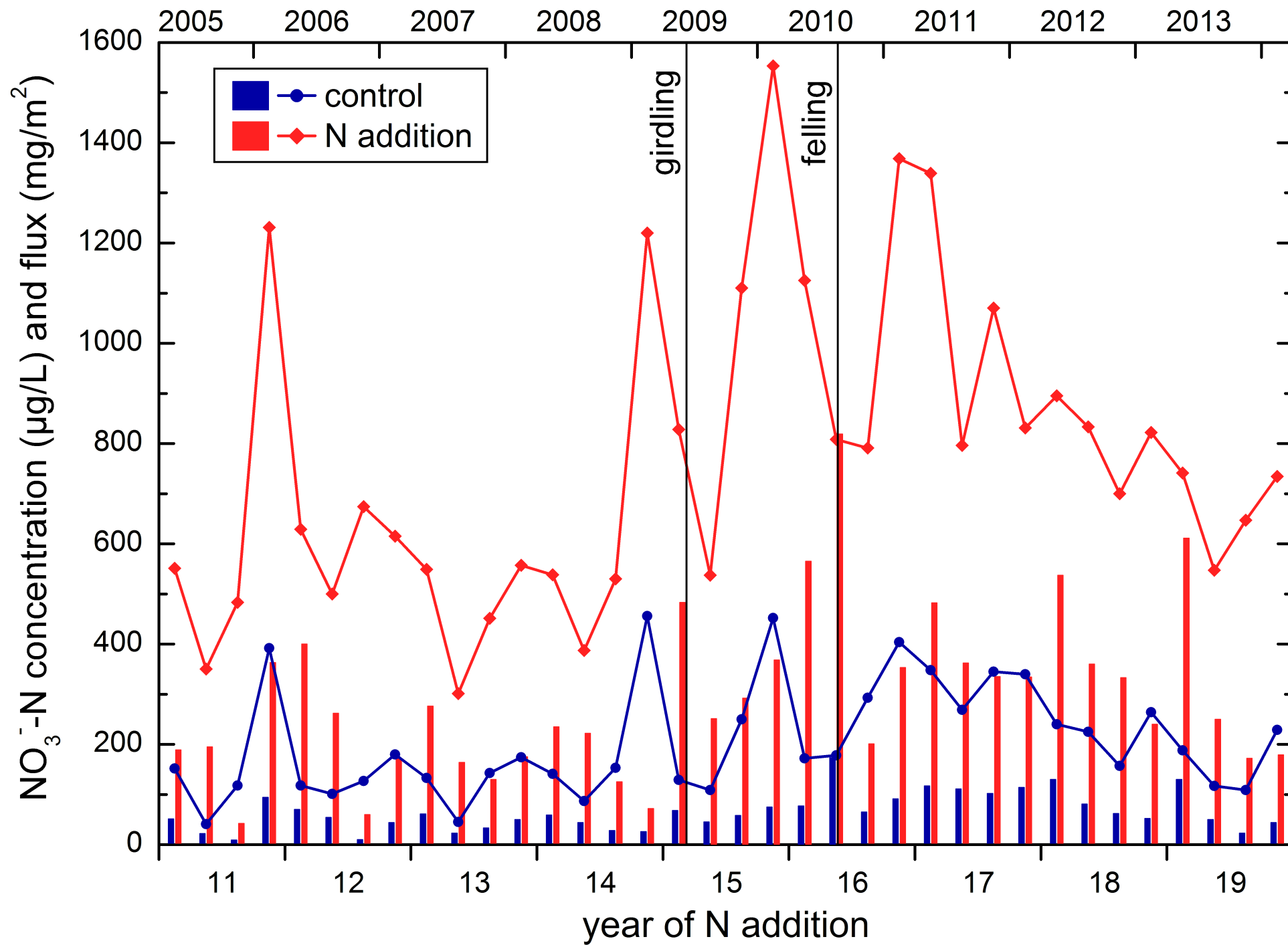
... and felling: effects on nitrate leaching and on greenhouse gases



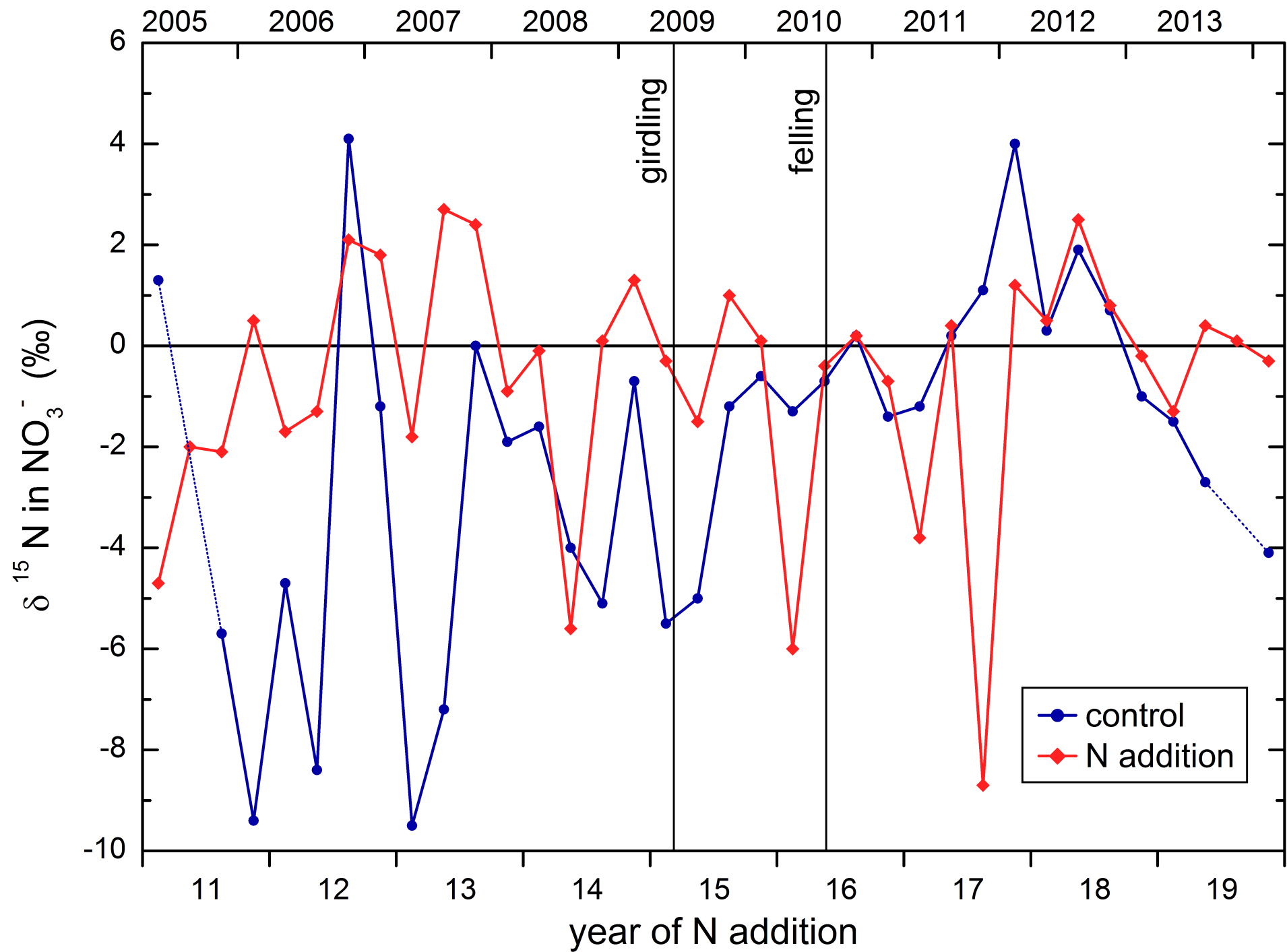
Nitrate leaching



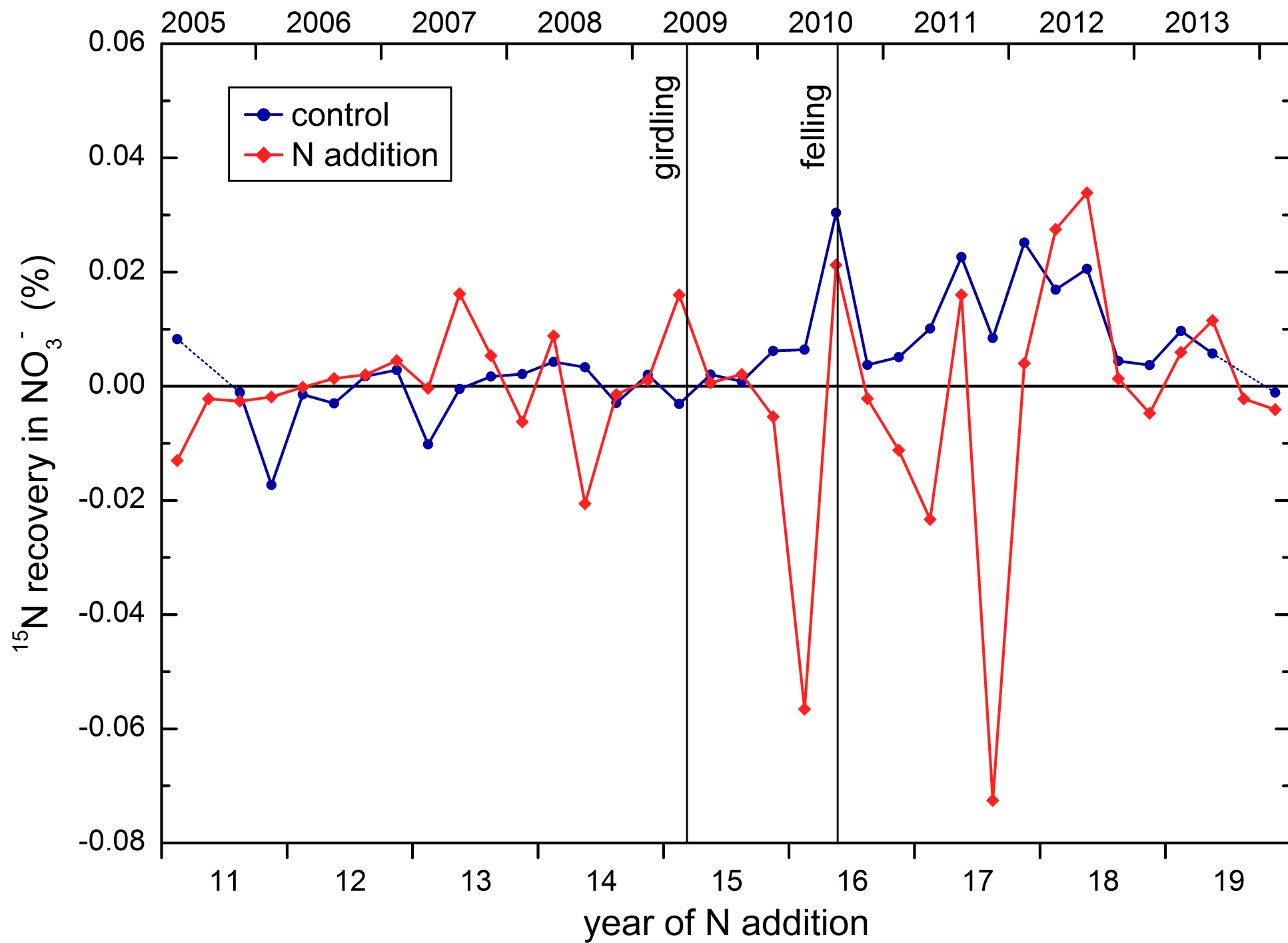
Nitrate leaching after tree girdling and felling



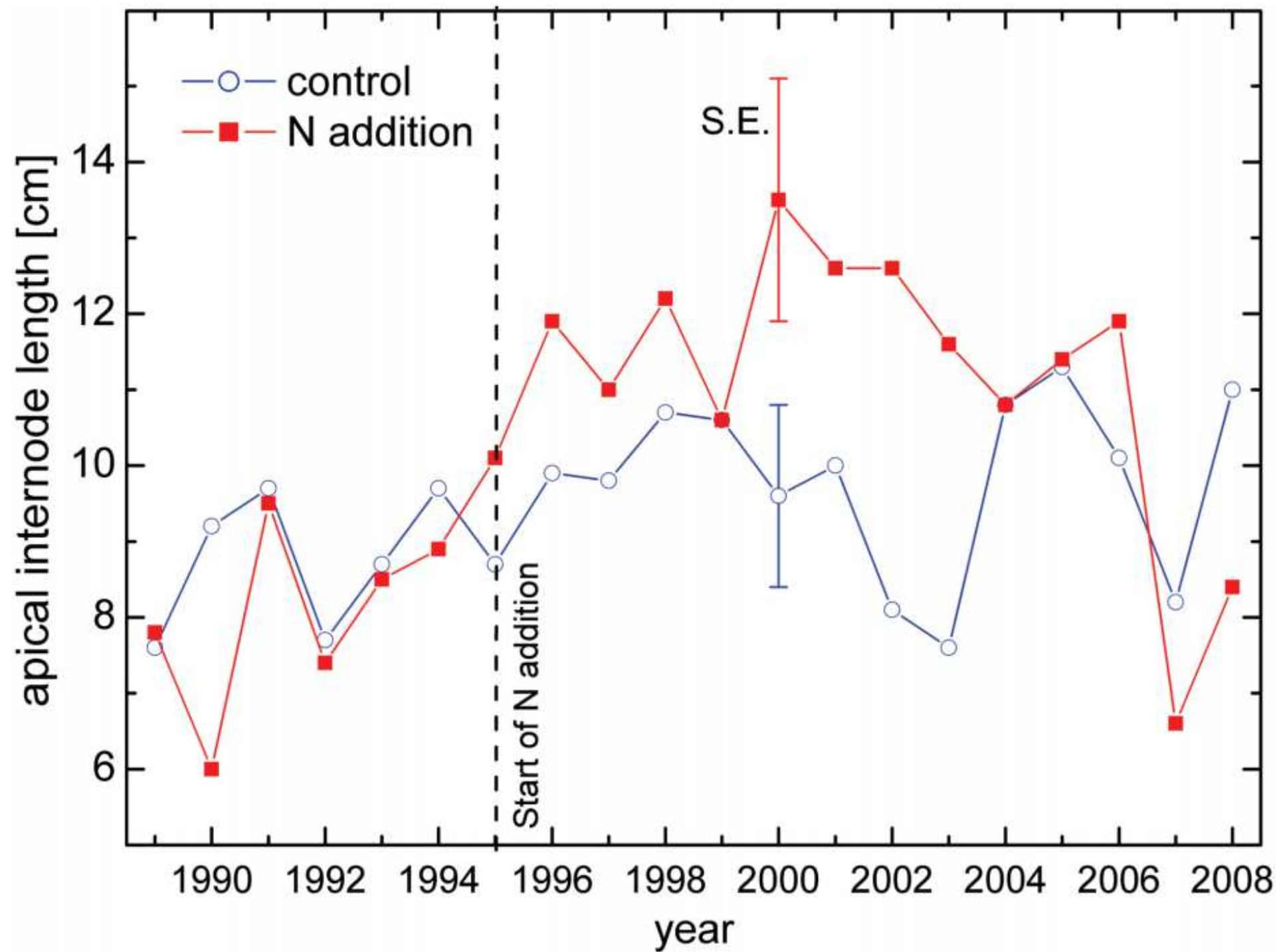
$\delta^{15}\text{N}$ in nitrate leaching after tree girdling and felling



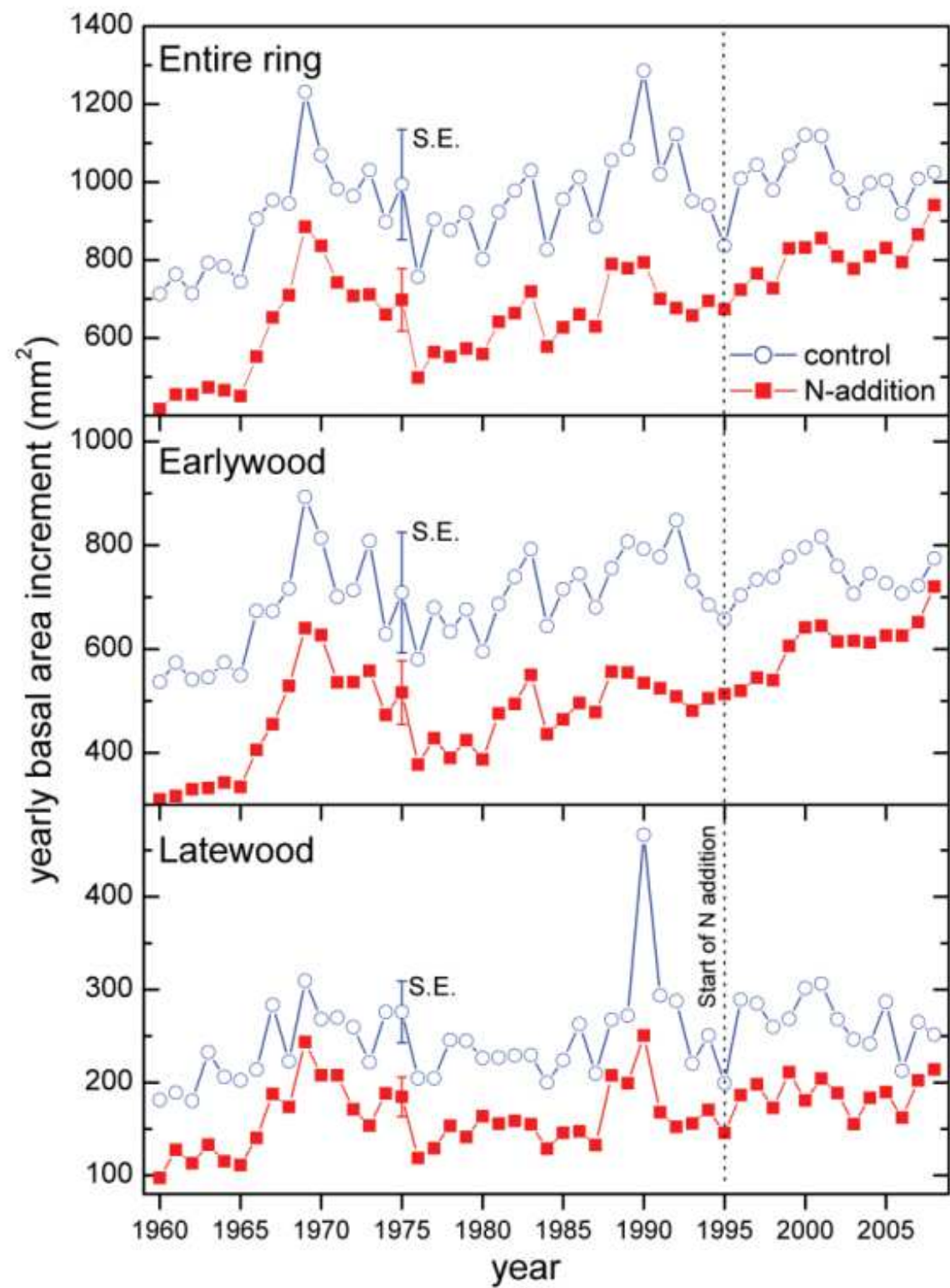
¹⁵N recovery in nitrate leaching after tree girdling and felling



Tree height growth



Tree rings



Needles

