Biogeosciences Discuss.,
https://doi.org/10.5194/bg-2020-66-AC1, 2020

Biogeosciences Discussions
Open Access
EGU

Interactive comment on "Silicon isotope fractionation and uptake dynamics of three crop plants: laboratory studies with transient silicon concentrations" *by* Daniel A. Frick et al.

Daniel A. Frick et al.

dfrick@gfz-potsdam.de

Received and published: 23 April 2020

Dear Anonymous Referee #2

Thanks for taking your time to review our manuscript.

Regarding your immediate question how we assessed the water uptake/transpiration: The pots were weighted weekly without the lid and plants, using a balance. The weight difference to the previous week is reported as volume taken up by the plants, assuming a density of 1 g/mL. We replenished the pots by filling up with ultra-pure water to the weight from the previous week. The pots were closed with a lid, and we thus neglect

Printer-friendly version

Discussion paper

evaporation. The term transpiration is thus referred to the water taken up, which is either lost by transpiration and guttation or stored in the biomass. Based on previous reports (e.g. Joachimsmeier et al., 2012) the amount of fluid lost through guttation, was considered negligible during the course of the experiment.

Best regards, Daniel A. Frick

Reference: Joachimsmeier, I., Pistorius, J., Heimbach, U., Schenke, D., Kirchner, W. and Zwerger, P.: Frequency and intensity of guttation events in different crops in Germany, in 11th International Symposium of the ICP-BR Bee Protection Group, Wageningen (The Netherlands), November 2-4, 2011, vol. 437, pp. 87–90., 2012.

Interactive comment on Biogeosciences Discuss., https://doi.org/10.5194/bg-2020-66, 2020.

Printer-friendly version

Discussion paper