

Accepted Manuscript

The influence of drought intensity on soil respiration during and after multiple drying-rewetting cycles

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PII: S0038-0717(18)30313-4

DOI: [10.1016/j.soilbio.2018.09.018](https://doi.org/10.1016/j.soilbio.2018.09.018)

Reference: SBB 7285

To appear in: *Soil Biology and Biochemistry*

Received Date: 28 May 2018

Revised Date: 18 September 2018

Accepted Date: 20 September 2018

Please cite this article as: Li, J.-T., Wang, J.-J., Zeng, D.-H., Zhao, S.-Y., Huang, W.-L., Sun, X.-K., Hu, Y.-L., The influence of drought intensity on soil respiration during and after multiple drying-rewetting cycles, *Soil Biology and Biochemistry* (2018), doi: <https://doi.org/10.1016/j.soilbio.2018.09.018>.

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1 **The influence of drought intensity on soil respiration during and after multiple**
2 **drying-rewetting cycles**

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13 **Abstract**

14 Global climate change is projected to intensify soil drying-rewetting (DRW)
15 events with extended drought, especially in arid and semiarid ecosystems. However,
16 the extent to which the soil DRW with intensified drought can alter soil respiration (R_s)
17 in forests is still under debate, and subsequent legacy effects on R_s are not well
18 understood. Here, we conducted a 180-d soil incubation experiment to investigate
19 how soil DRW with different drought intensities alter the R_s in poplar (*Populus*
20 *simonii*) and Mongolian pine (*Pinus sylvestris* var. *mongolica*) plantations. The
21 incubation experiment included four 30-d cycles of 1) constant moisture treatment

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