

Interactive comment on “Acute glyphosate exposure does not condition the response of microbial communities to a dry–rewetting disturbance in a soil with long history of glyphosate–based herbicides” by Marco Allegrini et al.

Anonymous Referee #2

Received and published: 15 May 2020

The response of microbial communities to different perturbations is of great interest for designing sustainable farming practices (either tactic or strategic). Particularly the long term effect of GBHs is relevant in no-till agricultural systems, and the dry-wetting effects are important in rainfed agriculture. This research explores in a microcosm experiment the effect of GBHs and dry-rewetting perturbations on soil microbial communities, but the interaction effect was not clear. Despite sound methods were used in the present work, deeper studies are needed and can be addressed with new research techniques

C1

like microbiome sequencing and also by repeated cycles of dry-rewetting to address more clearly the ecological impact (eg. resilience, resistance to disturbance). The manuscript is appropriate for publishing in SOIL. Some minor corrections are needed: 1- Check references: year in text is different from the year in References list a. Line 40 and 148: Evans and Wallenstein, 2011 or 2012? b. Line 87: Zabaloy et al 2016 is not in Reference list c. Line 89: Pfeiffer et al 2013 or 2014? d. Line 144: Clements and Rohr 2009 or 2008? e. Line 151: Franzluebbers et al 1995 or 1994?

2- As Reviewer #1 suggests, the concept of PICT response and the absence of interaction could be explained with more detail.

3- Line 58: how many years is “long term”? Despite described in Allegrini et al 2015, please indicate in the text.

4- Line 48: change quantitae by quantity

Interactive comment on SOIL Discuss., <https://doi.org/10.5194/soil-2020-11>, 2020.

C2