

Interactive comment on “Wildfire effects on biological properties of soils in forest-steppe ecosystems of Russia” by E. Maksimova and E. Abakumov

Anonymous Referee #2

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In my opinion the manuscript requires very significant revisions before possible publication. I am not a native speaker but I think the English must be revised, manuscript is not clearly written and concise. In general there is a great confusion in all the manuscript between microbial activity and microbial properties and microbial biomass. The authors analyse two microbial properties: “Soil carbon biomass” and “basal respiration”. Please change in all the text “microbial biomass” by “soil carbon biomass” and “microbial activity” or “biological activity” by “biological parameters or properties”

Abstract

Please change “soil biological properties was measured by fumigation method” by “soil

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biological properties as soil carbon biomass and basal respiration was measured” The authors must unify the terms used as “biogenic elements” “biophile elements” to name P and K, I suggest to use always the term “nutrients”.

Introduction

Please change the sentence “The main index of the microbial complexes functioning are values of carbon. . . These properties are good indicators of soil quality, but there are other parameters to study the microbial functioning.

Material and Methods Please explain what a riding fire is? and what is the difference with a local fire? Clarify the experiments: how many plots there are for treatment? How many samples do you take per plots? Please be concise remove “more than 50 soil samples” “about 30 samples” give the number of samples taken. I suggest include more parameters in table 1 general properties as: % sandy; % lime; Electrical conductivity; organic carbon. Laboratory analysis: Please change “. . . were studied in a fine earth” by “were studied on fine fraction soil after being sieved at xx mm”

Result and discussion

Has been the control applied with any organic refuse? It is not clear. Why is there ash in the control? What is the origin? Please explain. The result must be supported with more references, the statistics are not included in tables of the results, please include. The authors related the decrease of biological parameters with the content of organic matter in text and they have not determined the organic carbon content in any sample of soil!! I do suggest determining the organic carbon content in different soils to explain the behaviour of the microbiological parameters.

Interactive comment on Solid Earth Discuss., 6, 71, 2014.

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