

PLEASE, IN RED YOU FIND OUR REPLIES, IN GENERAL AND POINT-TO-POINT TO REFEREE

## Interactive comment on "Study of microarthropod communities to assess soil quality in different managed vineyards" by E. Gagnarli et al.

### Anonymous Referee #2

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Study of microarthropod communities to assess soil quality in different managed vineyards

Referee comment

This paper constitutes an interesting work concerning the effects of agricultural practices on soil fauna. However methodologies used and described are not at the required scientific level to be published in the current state. Furthermore the introduction and discussions are weak. This study seems to be only a study case. What generic information this study gives to the scientific community, which has not been published before?

Absolutely, we are very thankful to the anonymous referee for the comments. These are a useful input to understand that some of our design/results have perhaps not been clearly explained and, consequently, not adequately appreciated. Although the opinion of the referee, we took the chance to profit by his indications to increase the value and the structure of the ms.

We strongly restructured and integrated the introduction and conclusions on the basis of these comments. In this context: we modified the title (we calibrate to a 'case study' the ms).

Abstract Line 19 : you mention a multidisciplinary approach, which is not the case here.

Done.

Line 24: you did not identify species, so you can speak about species richness Line 29: what is a preserved soil? For what?

Done. Preserved soils – generally where the highest BSQ values were registered - are the forest soils of temperate regions.

Introduction Your introduction is too fuzzy and general, with trivial information. I would really have some information on the studied systems and the context of the study. What about vineyard soils? Very few studies have been published on the topic (microarthropods in vineyards), but some data exists (for instance Renaud et al 2004, Pedobiologia, for instance). What are the particular problems specific to vineyards? No precise information is given concerning organic matter. Line 31: you mention food-webs. How do you assess them?

The Introduction was heavily re-elaborated. The sites' description was deepened and details were furnished. We tried to refresh the aim to emphasize the role of biodiversity and indexing to characterize the difference in managements. The citation of Renaud was inserted. The sentences on food webs were for the general context: they were cut off from discussion and left in Introduction.

Material and methods Line 10: What means IPM?

Details were furnished

Lines 13 and 17: How many samples did you collect? Line 6 and 7: species were not identified Table 1: what are the differences between sites 1, 2 and 3. Describe the plots please. How many samples and subsamples?...

Details were furnished

Table 2: please give at least standard errors of your means; Did you test the accuracy using ANOVA?

Our interest was to have information and characterize the soil. This analysis, now, is cut off.

Results I cannot appreciate the consistency of the results because the methods used are not well described. Table 3: no statistics shown in the results.

Methods were described more in detail. In Table 3 counts are maintained, while the t-test was applied to compare total abundance by management

Line 28: you describe physico-chemical parameters in the chapter soil microarthropods abundance

Restructured the set of the ms

Discussion trivial

Please, read the first sentence in reply