

## Review of: "Spatial turnover of soil viral populations and genotypes overlain by cohesive responses to moisture in grasslands"

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This paper has carried out a very good work on soil virus of grassland and its response to water. The chart of the article is beautiful, but there are still some problems as follows:

At present, the introduction of the article is too simple to explain why it should be done, that is, scientific questions are still relatively weak. In addition, the discussion is lack of comparison with other studies, and what is the significance of these results. The related writing needs to be improved.

This paper emphasizes that virus distribution depends on spatial heterogeneity, so what is the real reason behind it? In previous studies, it is generally believed that what factors affect the distribution of viruses? What are the findings of this study?

Why you chose March and April need to be explained, such as the difference in precipitation.

What is the significance of comparing viruses with bacteria?

Can figure 1 reflect the differences between different precipitation treatments?

What is the difference between the PCoA3 in figure 3 and PCoA1 and 2 in figure 1? The differentiation of 1 and 2 was different from the factor of 3? Whether to consider making the coordinate diagram of the three axes.

In this paper, the specific classification of viruses is not described, which greatly reduces the significance of the research. For example, figure 2 OTUA,B,C..., can you find out what the specific virus is? What role do these viruses play in the

grassland? And What are the implications of the response of viruses to soil moisture in grassland management?