

RC1:

Sun et al., assessed the diversity and function of the DSE community associated with *Miscanthus condensatus* root in volcanic ecosystems. Volcano on the Miyake-jima island was firstly erupted in 2000. Approaches of metabarcoding (next-generation sequencing) and isolation (culturing) were combined in this paper. This is truly remarkable, given that many recent studies are heavily reliant on sequencing. One of the interesting findings is that 70% of culturable fungi that colonized *Miscanthus condensatus* belonged to DSE by both sequencing and culturing methods. Also, valuable work is done to validate these DSE isolates (such as *Phialocephala fortinii*) effects on rice growth by inoculation. These data improve our understanding of *Miscanthus condensatus*-associated DSE fungi and their functions in promoting plant growth in extreme environments. This paper ought to gain a lot of attention. I recommend the paper for publication with some minor corrections.

Re: Thanks for your positive comments.

The introduction needs to be further improved to be more concise and avoid competition with discussion. And pay attention to the references.

Re: We have removed the competition part between introduction and discussion. Also added the references as suggested below.

Keywords may include: inoculation, plant growth promotion

Re: These keywords are added, thank you.

Line 54, why “promote plant colonization in extreme” is important? I recommend to add with more details.

Re: We have amended it as “The association of these fungal micro-organisms that promote plant colonization is significant in extreme conditions. As these fungal symbionts help plant survival mainly by: improving host nutrient uptake (Usuki and Narisawa, 2007; Yadav *et al.*, 2009), defending against pathogens (Busby *et al.*, 2016), promoting tolerance to abiotic stress (Rodriguez *et al.*, 2008; Gill *et al.*, 2016), and modifying trophic interactions (Clay, 1996; Omacini *et al.*, 2001; Bultman *et al.*, 2003). ”

Line 80, what do you mean “wild”?

Re: it means genetically wild type. We have also amended in the text.

Line 81-82: reference

Re: The reference has been added, thank you.

Line 86: 'decreased' to 'influenced' as the actual yield is increased globally.

Re: It has been revised, thank you.

Line 89-90: reference

Re: We have removed this sentence to avoid any confusion.

Line 97, why lime is important? this part must be carefully checked and make it more relevant to this study. Also, add a concluding sentence here.

Re: lime has its shortage while it helps alleviate acidic harm. So that is why we suggest fungal inoculation in plant growth in acid soil.

Line 98: '5.0-8.5' is the growth range or the optimal range? Reference

Re: It is the optimal pH range for rice growth. Reference is added as well. Thank you

Line 101: reference

Re: It has been added, thank you.

Line 131: change reference format

Re: We have amended it accordingly.

Line 143-147: move to MM section

Re: We have some introduction in MM section. Here, we would like to keep it as the readers could have a quick understanding of our purpose of this study. Thanks.

I also found this content a little boring. Therefore, follow the referee's instructions and move them to the M & M section.

Line 270, a more relevant subtitle should be provided in the discussion part, some of sentence are introduced in the early part, please avoid repetitive.

Re: I think the subtitle was given in our last version. The repetitive is avoid, as suggested above.

Line 393, please rephrase this sentence.

Re: It has been done, accordingly. Thank you very much.

Fig 1B: Which type of the map? DEM or DSM? Specify it in the caption.

Re: It has been done, thank you.