

Dear Referee

Thanks lot for your comments for our paper (SE-2015-100). We have considered all the advices and suggestions of you.

Major changes to the paper include

improvement of the introduction

Results and Discussion, and

Tables and Figures.

Responses to Referee' specific comments

Comments

1 Introduction The introduction should be restructured, especially from Line 8 to Line 25, page 3225. From line 8 to line 17, recent research results related with the study should be cited. In addition, from line 18 to line 25, please also adjust the paragraph. According to my understanding, as you mentioned, Fe-Pi and Al-Pi would be existed besides Ca-Pi, however, why they were not focused in this study? It seems that the author wants to describe the method that they used, if so, please re-interpreted this part logically. Finally, there is also a lack of the critical part in the introduction, such as the identification of knowledge gaps. From line 8 to line 25, the author listed a number of studies, and the most important issue I think is to identify what has been finished and what has not been done, but to be solved in the current study. Therefore, please reorganize the introduction explicitly.

The part of abstract is now changed.

2 Material and Methods In the site description, the author mentioned two plantations. Vegetation plays critical roles and impact on soil profiles significantly. Here I suggest the general information of vegetation in the buffer areas of the 3 sites are necessary to be introduced. Page 3226, line 22 and line 24, how to define the drought season and rainy season? The exact months? Please clarify this part in order to make a better understanding for your sampling period (during April and May.....) Meanwhile, some references are better to be added to support the sampling method Furthermore, I found the author used the USDA system for soil texture classification in the result and discussion(Line 21,Page 3228). Nevertheless, it should be introduced in the material and methods in advance, please illustrated the method of soil texture classification clearly in 2.3, page 3227. Finally, for the data analysis, please describe the significance level and data expression in detail.

The part of material and methods is now changed. The method of soil texture classification has been described. In the part of data analysis, the significance level and data expression has been illustrated. The general information of vegetation in the buffer areas has been introduced.

3 Results and discussion With regards to the Results and Discussion, I suggest that it could be separated into two parts. There is no doubt that this part would be extremely interesting to discuss literature from other regions to extend the content, however, it difficult to find some new discoveries in the current study. Instead of this, what could be found are some commonsense points and reports from long time ago (line 8-11 page 3230, line 15-17, Page 3232). Although the results were expressed well, the discussion in each subsection is weak, particularly it could not find any new references from other riparian buffer zones. Thereby, I recommended that the author should be revised this part carefully and compared with the results from recent studies. Line 4-7, page 3231, please use "R SQUARE" instead of "r"

The part of results is now changed. The results from recent studies has been compared within the discussion part.

Tables and figures For the table 1, I am not sure if values should be rounded to the nearest whole number. Generally speaking, it is better to have the least significant digits of the number for percentage. Meanwhile, all tables may also be improved by adding more statistical metrics(e.gMean+/-SDsorSEs). In addition, lsd should be in capital. Most important, I suggest add a new table to depict the general information of the vegetation in the 3 study site. The size of the characters in the figures is too small. It should be similar with the size of the characters in the figure caption. Color map is better to depict sampling sites in Figure 1. Figure 2 to figure 4 should be redrawing, the error line should be added to the line chart directly. Error bar should be also exhibited in Figure 6.

The value of LSD has been added in Table 1 and color map has been used in Figure 1. Because of LSD bars are already in those figures, the error lines or bars are not added to avoid confusion.

Yours Sincerely

Dr G S Zhang