Biogeosciences

Discussions

Open Access

EGU

BGD

Interactive
comment

Interactive comment on "Rainfall pattern greatly affects water use by Mongolian Scots pine on a sandy soil, in a semi-arid climate" *by* Hongzhong Dang et al.

Anonymous Referee #1

Received and published: 20 March 2017

Identifying the water use by Mongolian Scots pine (Pinus sylvestris var. mongolica) is always the core of ecological restoration in arid and semiarid regions. In this study, the authors have analyzed the sap flux density, transpiration and its relationship with precipitation and soil moisture. The manuscript is suitable to publication in this journal; however, the author should make a minor revision mainly because of the poor organization of results and discussion part. My comments are shown as follows: Title: Please give the full Latin name of Mongolian Scots pine. Abstract: The abstract is too long, please shorten it and try to use more concise and simple sentences. Line 15-25: the sentences were too long, the writing should be shorter and clearer. Line 23: how long did the daily Ts recovered completely? Line 25: did you have any results of

trees growth influenced by large intra- and inter-annual variances in rainfall? Did you analyze the rainfall intra- and inter-annual variances? Line 27: What does MP mean? Introduction: Line 34: I think here "However" is better than "nevertheless". Line 36: timings here means rainfall interval? Line 47-48: rewrite this sentence. Line 60-63: this paragraph was mainly talked about soil water availability, thus, I think those sentences were not suitable here. Line 67-69: did this hypothesis reasonable? The author declared that 85% of the roots were in the shallow soil layers, but there were still 15% of the roots in the deep layers, they may absorb water from the groundwater, and in addition, what is the groundwater table in this region? Line 70-73: I think it should be removed to the method section. Line 74-76: please rewrite this sentence. 2 Materials and methods: please give a figure of your study site. Line 90: I suggest giving the rainfall amount (average and the year of 2013, 2014 and 2015) in Figure 1. Line 101: what types of sensor? 3 Results Line 199-203: the sentence was too long, I think a table here would be better. Line 244-245: remove this sentence to the method section. Line 246-249: rewrite this sentence. Line 260: how many rainfall events in the dry-wet shift in 49 days? Especially before the one off big rain event, is there any other small rainfall events? And in my opinion, I think after the rain, especially the number of rewetting days should be same if you want to compare in different years. 4 Discussion Line 277-283: remove this sentence to the results section. Line 304-306: delete or remove to the result section. 4.5 I think this part should be removed to the result section.