

***Interactive comment on* “Growth characteristics of natural and planted Dahurian larch in northeast China” by Bingrui Jia and Guangsheng Zhou**

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General Comments The discussion paper is a good contribution with grateful collection of review data on characteristics of natural and planted Dahurian larch in northeast China. I think it can be accepted for publication after minor revision.

Special Comments 1. In section 3.2, it is not suitable to establish the linear H-DBH correlation, because the relationship between mean H and DBH is nonlinear. It is suggested to use the power function $H=a*DBH^b$, which is expected with higher R^2 than linear model. 2. In the introduction, some newly published papers can be cited, such as Zeng (2015) and Zeng et al. (2017). Also, F. Achard suggested to refer to two other papers, which might be more helpful to readers.

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Technical corrections Line 40: “is payed” is suggested to be placed with “has being paid”. Line 50: “e.g. tree height, diameter” is suggested to be changed into “e.g. diameter at breast height or DBH, and tree height”. Line 54-56: Saying “a small quantity of samples” is not suitable for more than 50 (N=83, Wang et al, 2008). Additionally, two papers could be cited here. –Zeng WS. Integrated individual tree biomass simultaneous equations for two larch species in northeastern and northern China. *Scandinavian Journal of Forest Research*. 2015, 30(7): 594-604. –Zeng WS, Duo HR, Lei XD, et al. Individual tree biomass and growth models sensitive to climate variables for *Larix* spp. in China. *European Journal of Forest Research*, 2017, 136 (2): 233-249. Line 56-57: Age is suggested to be included here, and DBH be in front of tree height. Line 70-71: Saying “literature and book” is not suitable, because literature includes book; “tree height, DBH” is suggested to be placed with “age, DBH, tree height”, because age is necessary for a growth data set (if the title is not changed), and DBH is more important and easily measured than tree height. Line 97: “and” is suggested to be followed by “/or”. Line 100-101: “between 40.85°N and 53.47°N; between 118.20°E and 133.70°E” may be better to be changed into “located about 40.85°N-53.47°N and 118.20°E–133.70°E”. Line 113: “old man forest” may be difficult to understand, could we say “over-matured and low-yield forest”? Line 114-115: “Tree height and DBH” is suggested to be changed into “DBH and tree height” for the above-mentioned reason. In addition, it is better to add “(DBH for quadratic average and tree height for arithmetic average)” in the sentence. Line 119-120: The order of characteristics needs to be changed as suggestions. Line 136-137: In Table 1, the number of province is 4, not 776; the number of DBH is 697, if including base diameter; and the value of range of Height, DBH, Vtree and Vstand is better to keep three significant digits, e.g., 29.4, 34.9, 936, 975 instead of 29.40, 34.89, 935.73, 975.32, respectively. Line 146-147: LY 208-77 was a ministerial standard established by Ministry of Agriculture and Forestry in 1978. Line 148-149: Linear model is not suitable for the relationship between mean H and DBH. Line 158: Fig.2 should be updated with nonlinear model. Line 167: “the” needs to be deleted. Line 188-189:

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This reference needs to be revised and move ahead.

Please also note the supplement to this comment:

<https://www.earth-syst-sci-data-discuss.net/essd-2017-99/essd-2017-99-SC2-supplement.pdf>

Interactive comment on Earth Syst. Sci. Data Discuss., <https://doi.org/10.5194/essd-2017-99>, 2017.

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