

Interactive comment on “Experimental sand burial affects seedling survivorship, morphological traits and biomass allocation of *Ulmus pumila* var. *sabulosa* in Horqin Sandy Land” by Jiao Tang et al.

Anonymous Referee #2

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General comments: *Ulmus pumila* v. *sabulosa* is an indigenous tree species in Horqin Sandy Land, which is main proportion of sparse woodlands in this area. How to facilitate it to naturally regenerate is an important and interesting problem in ecological restoration of degraded grassland. The manuscript investigates the survivorship, morphological traits and biomass allocation of *U. pumila* v. *sabulosa* buried with different burial depths. The topic is interesting. The results will be useful, in that it gives some proofs and facilitates further understanding for plant seedling survival strategy in eroded sandy environment. The experimental set-up and the study methods used seem adequate. The paper is within the scope of Solid Earth, and the research was

C1

performed in an interesting area of China. I recommend that the paper is reconsidered for its publication in Solid Earth after some corrections are done.

Special comments: 1 In introduction part, the scientific questions of this study was not clear, and scientific hypothesis and scientific significance were not clearly mentioned. I suggest authors revise this section. 2 In Experimental methods, “seedlings were experimentally buried to either 0, 33%, 67%, 100%, or 133% soil depth of the original mean seedling height.” I wonder why 133% of seedling height treatment was conducted. 100% buried means no photosynthesis occurred, and will result in the death of the seedling. I think the treatment of 133% is unnecessary. 3 In Statistical analysis, using the methods of one-way ANOVA and multiple comparisons to analyze were not adequate, in that the experiment was a gradient test (0, 33%, 67%, 100%), I suggest you try to use regression analysis to analyze the relationship between variables and buried ratios. 4 Fig.1 was useless.

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C2