

Interactive comment on “Rapid revegetation by sowing seed mixtures of shrub and herbaceous species” by J. J. Feng et al.

Anonymous Referee #1

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In this paper the authors show the result of different sowings with seed mixtures under controlled conditions. The main aim is to develop a method for rapid revegetation in North China Plain, a region under severe desertification processes. Specifically the authors test combinations of a shrub and three herbaceous species. The topic is interesting due to its potential application in programs for combating land degradation. However, a more ecological approach had helped to improve the potential use of generated data. In this way, including different factors than may be involved in the revegetation process under natural conditions (microsite heterogeneity, interactions with other plants naturally present in the area during the establishment stage and long-term plant dynamics). Moreover, I miss a working hypothesis and a mechanistic interpretation of the results, perhaps focused on traits and their functional complementarity in the tested species. A mechanistic approach would be also ideal in the introduction, which is a bit

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cursory.

Methodologically the paper is acceptable, even though I had recommended decreasing the Ratio by mass treatments in favour of real replicates, as the 1x1 m² sample plots might be formally considered as pseudo-replicates. I miss a table with a better characterization of the target species (Family, life form, average size, etc.)

As the authors emphasise the duration of total plant coverage in the paper, some discussion on the likely dynamics of the established plant communities in subsequent years would be interesting. In this way, both plant intraspecific (density-dependent) and interspecific competition could significantly change the community structure and the final plant cover of the sowed species along time, which might be discussed in order to prevent undesired results in a hypothetical extensive sowing.

Figures 2 and 3 are not useful if they do not show Standard Error or other estimator of the variation in measurements to a probabilistic statement about estimates of the population mean.

The paper is filled of orthographical and grammatical errors that hamper the reading and understanding of the paper. I recommend to change by:

Page 370. line 2: A field experiment. line 15: from July. Page 371. line 3: roads. line 9: and as a result. line 12: vegetation respond. line 20: rapidly covering. line 22: shrubs and grasses.

page 372. line1: should be based on. line 8: how different proportions of species affect. line 11: how different herbaceous species affect the growth. line 21: in the Ecological.

page 373. line 1: for the experiment. line 2: are shown. line 8: are shown in Table 2. line 21: in slopes.

page 374. line 9: in each plot.

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page 377. line 6: ranged from.

page 378. line 9: Based on the speed and the stability of coverage. line 10: was consistent.

page 379. line 11 and 15: coefficient of variation. line 20: natural ecosystems.

page 380. line 8: was consistent.

page 381. line 7: perhaps you want to say “were showed with shrubs”. line 9: wherever the soil.

page 386. Table 2, third and following rows: was the same than with.

Interactive comment on Solid Earth Discuss., 7, 369, 2015.