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Biogeosciences Discussions

Interactive comment on "Nitrogen enrichment enhances the dominance of grasses over forbs in a temperate steppe ecosystem" *by* L. Song et al.

L. Song et al.

liu13500@yahoo.com.cn

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Reply to Mosier's Comments The two reviews provide a good basis from which to improve the manuscript. Please respond to each question made by both reviewers. In addition to the points made by reviewers a set of literature that describes studies in a North American shortgrass steppe ecosystem need to be incorporated into the paper's literature review and discussion. Example of relevant papers include: Dodd, J.L. and W.K. Lauenroth. 1979. Analysis of the response of a grassland ecosystem to stress. Pp. 43-48. In. N.R. French (ed) Perspectives in grassland ecology. Springer-Verlag, New York. Lauenroth et al. 1978. The effect of water and nitrogen-induced stresses on plant community structure in a semiarid grassland. Oecologia, 36:211-222. and a general overview paper: Lauenroth et al. 2008. Net primary production in

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the shortgrass steppe. In. W.K. Lauenroth and Ingrid C. Burke (eds) Ecology of the Shortgrass Steppe: A long-term perspective, LTER Research Network Series, Oxford University Press. Pp 270-305. Of particular importance is the impact of soil moisture on plant production in the semiarid system. The shortgrass steppe studies bring out the importance of growing season precipitation patterns on annual net primary production and the interactions with nitrogen fertilization.

Response: The manuscript has been revised according to the two reviewers' and your comments. We have answered all questions made by the two reviewers. And we have also added above three literatures into the introduction and discussion parts of our paper. The new references as well as your comments will help us to further understand the interaction between N input and water supply, both of which usually limit plant growth simultaneously in semiarid steppe.

Please also note the supplement to this comment:
http://www.biogeosciences-discuss.net/8/C2420/2011/bgd-8-C2420-2011-supplement.pdf

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Interactive comment on Biogeosciences Discuss., 8, 5057, 2011.