

Interactive comment on “Effects of wood chip amendments on the revegetation performance of plant species on eroded marly terrains in a Mediterranean mountainous climate (Southern Alps, France)” by V. Breton et al.

Anonymous Referee #1

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The paper is of good quality and shows interesting research how degraded land in gullies and badlands can be restored. However, it is important to keep in mind that the source of soil erosion in the world comes from agriculture land and this should be shown clearly in the paper.

You could get some information from these recent papers below that deal with this issue:

Debolini, M., Schooli, J.M., Temme, A., Galli, M., Bonari, E. Changes in Agricultural Land Use Affecting Future Soil Redistribution Patterns: A Case Study in Southern

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Tuscany (Italy)(2015) Land Degradation and Development, 26 (6), pp. 574-586 DOI: 10.1002/ldr.2217 Li Q. Y., Fang H. Y., Sun L. Y., Cai Q. G. Using the 137Cs technique to study the effect of soil redistribution on soil organic carbon and total nitrogen stocks in an agricultural catchment of Northeast China. (2014) Land Degradation and Development, 25 (4), pp. 350-359. Cited 2 times. DOI: 10. 1002/ldr. 2144 Cerdà, A., Flanagan, D.C., le Bissonnais, Y., Boardman, J. Soil erosion and agriculture(2009) Soil and Tillage Research, 106 (1), pp. 107-108. DOI: 10.1016/j.still.2009.10.006 Novara, A. Keesstra, S., Cerdà, A., Pereira, P., Gristina, L. 2016. Understanding the role of soil erosion on CO₂-C loss using ¹³C isotopic signatures in abandoned Mediterranean agricultural land. Science of The Total Environment, 550, 330-336, <http://dx.doi.org/10.1016/j.scitotenv.2016.01.095>. Ochoa, P.A., Fries, A., Mejía, D., Burneo, J.I., Ruíz-Sinoga, J.D., Cerdà, A. 2016. Effects of climate, land cover and topography on soil erosion risk in a semiarid basin of the Andes Catena, 140, 31-42.

And also you should highlight that mulch strategies contribute to reduce the soil losses also in agriculture land See here some examples Prosdocimi, M., Jordán, A., Tarolli, P., Keesstra, S., Novara, A., Cerdà, A. 2016. The immediate effectiveness of barley straw mulch in reducing soil erodibility and surface runoff generation in Mediterranean vineyards. Science of the Total Environment, 547, pp. 323-330. DOI: 10.1016/j.scitotenv.2015.12.076 Mwango, S.B., Msanya, B.M., Mtakwa, P.W., Kimaro, D.N., Deckers, J., Poesen, J. Effectiveness of mulching under miraba in controlling soil erosion, fertility restoration and crop yield in the usambara mountains, Tanzania. Land Degradation and Development, DOI: 10.1002/ldr.2332 Sadeghi S. H. R., Gholami L., Sharifi E., Khaledi Darvishan A., Homae M. Scale effect on runoff and soil loss control using rice straw mulch under laboratory conditions. (2015) Solid Earth, 6 (1), pp. 1-8. Cited 6 times. DOI: 10. 5194/se-6-1-2015 Tejada, M., Benítez, C. Effects of crushed maize straw residues on soil biological properties. (2014) Land Degradation and Development, 25 (5), pp. 501-509. DOI: <http://dx.doi.org/10.1002/ldr.2316> Novara, A., Gristina, L., Saladino, S. S., Santoro, A., & Cerdà, A. (2011). Soil erosion assessment on tillage and alternative soil managements in a Sicilian vineyard. Soil and Tillage

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Research, 117, 140-147.

Novara, A. Keesstra, S., Cerdà, A., Pereira, P., Gristina, L. 2016. Understanding the role of soil erosion on CO₂-C loss using ¹³C isotopic signatures in abandoned Mediterranean agricultural land. *Science of The Total Environment*, 550, 330-336, <http://dx.doi.org/10.1016/j.scitotenv.2016.01.095>.

Interactive comment on *Solid Earth Discuss.*, doi:10.5194/se-2016-11, 2016.