

Interactive comment on “Rainfall and human activity impacts on soil losses and rill erosion in vineyards (Ruwer Valley, Germany)” by J. Rodrigo Comino et al.

Anonymous Referee #1

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General comments I found this paper as actual for the geomorphological and agricultural communities. The researches applied a combined methodology which included climatic, pedological, geomorphological and botanic-marks variables. They provide substantial data on soil erosion in old and young vineyards of the Ruwer Valley, Germany. The paper suffers from many mistakes in English (grammar, spelling, appropriate use of English language), and from unclear expression. I will not comment on these mistakes. The discussion should be improved. It does not relate to all of the results and includes repetitions of methods.

Specific comments There are many mistakes in English (grammar, spelling, using appropriate use of English language) in this paper (including the tables and figures). The

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abstract provides a concise and complete summary. P 2 L 14: First method? P 2 L 22: Are the ‘two experimental plots’, ‘two chosen vineyards’ are ‘the old and new vineyards’ the same? P 2 L 21–22: Please point on the table no. that includes the rates of soil loss that are written in these lines. P 3 L 1–2: Please explain the meaning of ‘unsustainable management of soil structure’ P 3 L 10: What are ‘...other potential and vulnerable areas.’ P 3 L 23: What are the ‘...several problems...’ P 4 L 7: What do you mean by dynamic? ‘These dynamic was significantly increased...’. Correct the English L. P 4 L 17: ‘influence of hydrological properties’ on what? P 4 L 21: Delete ‘like’ P 5 L 24: Delete the two ‘one’ and replace ‘of’ by ‘than’ P 6 L 2: ‘Along this point...?’ Do you mean ‘this transect’? P 6 L 22: ‘...summer months (65–72 mm). Add ‘per month’ after ‘mm’. P 6 L 23: Add ‘per month’ after ‘mm’. P 7 L 4: What was the size of the area of each soil sample? P 7 L 8: Did you measure more other properties? If no, why ‘such’ if yes, add the rest of the properties. P 7 L 9–10: Describe the methods saturation and absorption capacity. P 7 L 20–22: Rephrase the sentence. It is not clear. P 8 L 20–22: Add the number of rain simulations in each month in the period of August - October. P 8 L 25: ‘From...infiltration’ to results. Add the values of soil moisture in September. P 8 L 26: What was the ‘another method; in Dec. P 9 L 1: Delete the repeated sentence ‘(ii) investigate the relationship between the process and the soil surface components;’ P 9 L 9: Were the rills chosen in random? P 9 L 14: Change ‘declination’ to ‘inclination’. P 11 L 21: Change (4.1 and 13.7 %) to (4.1 - 13.7 %). I doubt if 4.1% organic matter content can be defined as high organic matter. I suggest to write the percentage of OM only. P 11 L 22: 58–80% ‘gravel material is not ‘several’. P 12 L 5: Delete ‘Description of’ and start with ‘Soil conditions’. I suggest to use ‘Soil surface characteristics’ instead ‘soil conditions’. P 12 L 19: To what time do you relate ‘at this time’. P 13 L 14: Describe the ‘hydrodynamic behavior’. Delete ‘this’ P 15 L 2–10: This is not a part of the discussion. Delete ‘This work presents... rainfall simulations’. P 15 L 12–13: ‘Although it was not possible to quantify the amount of transported fine sediment.’ What do you mean? P 15 L 13–14: On what results you are based when you declare ‘During the sample analysis and the different experiment structural instability of the soil was ob-

served.' Please define the term 'structural instability'. How the pedological conditions cause this structural instability? Add citations to your explanation. P 16 L 4: Discuss your results and Emde (1992) ones? Why there is no discussion on the effect of soil properties (table 1) on erosion ? In the old grapevines the organic matter content is higher than in the embankment and the young. You can add this to the causes for the different soil loss between the vineyards.

I suggest to indicate, in the discussion, the achievement of each one of the objectives. The conclusions need to be improved. Table 1: Particles smaller than 0.063 include silt and clay fractions. Why they are under clay definition? Over embankment? Use other term for over. Upper? Figure 8: This figure needs more discussion in "Discussion and conclusion". What are the reasons for the differences in the geometrical cross sections?

Interactive comment on Solid Earth Discuss., 7, 259, 2015.