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High-value viticulture in Northern Italy: farmers' perception of soil erosion in the Prosecco DOCG area

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During recent decades, the area of the Conservation Consortium of Conegliano and Valdobbiadene Prosecco Superiore DOCG, extensively cultivated for grape harvesting, has become one of the most important producers of Italian wines. However, this productivity is put in jeopardy by numerous hydrogeological issues and episodes of soil erosion caused by water. For integrated soil protection it is critical to include the farmers' opinions, as underlined by the International Decade of Soils 2015-2024. Farmers' perception is a cognitive process that gives the formation of the precept, but can also intervene in the decision-making process of problem solving. For this reason, during summer 2017 we carried out 78 interviews with local farmers in the area. Findings revealed a medium-low perception of soil loss caused by water (5-point Likert scale, M=2.44; SD=1.30), probably due to the (mis)perception that it is only meteorological-driven and neglecting the farmer's personal responsibility. According to wine growers, soil loss does not have lasting consequences and is only a concern due to the costs of replacing plants or rebuilding farming areas. Results showed that the farmers mostly did not acknowledge other on-site and off-site negative effects (e.g. loss of biodiversity and loss of nutrients). However, the interviewees agreed that it is an easily controlled phenomenon, heavily constrained by financial incentives. It seems that the economic constrains paradigm passes the expected adopter perception paradigm. In addition to financial reasons, education, the future business of the farm, and work experience have been found to be significant predictors in this regard (Eta-squared as a measure of effect size). The limited mitigation techniques used (grassing 97.44 % over mulching 33.33 % and green manure 1.28 %) could also be a proof of the limited concern and pro-active compensation measures.
Hazards salience analysis showed a higher concern towards climate extreme, from intense, short-duration precipitation to very long drought periods being overall of greater concern than erosion and hydrogeological risk. To facilitate the application and spread of effective mitigation techniques, there is a need to increase farmers', technicians' and institutions' awareness to find sustainable strategies for the mitigation and the control of soil loss, that would benefit from top-down cooperation.