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Extreme soil erosion event on experimental plots in steep slope German vineyards (Kanzem/ Saar)

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Due to global warming, violent summer rainstorms after dry periods will become more frequent in Central Europe. This is a great challenge for steep slope viticulture in the Mosel/ Saar region. Because steep slopes are particularly prone to soil erosion due to heavy rainfall, an adapted soil management is needed.
This presentation shows the effects of a short heavy summer rainstorm on steep slope vineyard soils in Saar Valley (Mosel region, Rhineland-Palatinate, Germany).
An extreme event in the night from May 31 to June 01 2018 with 80 mm rainfall in six hours (thereof 55 mm in one hour) results in extreme high soil losses. Even coarse material (> 2 mm) is transported.
Within the EU-funded project DIVERFARMING (Horizon 2020 no 728003) experimental plots are installed in conventional and organic vineyards of this area. Although erosion is initiated under both types of cultivation, conventional and organic, there are notable differences in extent and amount. A first assessment suggests that an intelligent organic management could help to prevent peak erosion events for steep slope viticulture areas, thus saving vast amounts of valuable soil substance.