



Sustainable slope reinforcement with strings of hay

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Sustainability, economic efficiency and landscape aesthetics in the sphere of erosion demand solutions adapted to site and region.

Within this publication at hand, this aim is to show how to counteract erosion danger and damage in the landscape through vegetation development, which on the one hand fulfils the necessary protective function, and on the other initiates site-specific ecological restoration with the implementation of indigenous species and materials. With this approach, not only the protection of slopes and embankments is accomplished accompanied by vegetation cover adapted to landscape, but also the preconditions for a near-natural development of the whole ecosystem, including also the fauna, are created. A aesthetic scenery is achieved and quite often are those measures attractive under economical point of view.

Strings of hay are produced from hay harvesting on meadows in the same natural region where the eroded slopes are laid. It is a technology from a institut that produced normally geotextils. The strings of hay can fix slopes with a height till 5 m and a gradient 1:1,25. The gradient of fixing is with ca. 45 degree optimal.

The effective reinforcement can be reached with a combination between a mechanical protection at first and later more and more a biological protection. The vegetation development seems that on one hand the species growth come from the meadows, on the other hand from the nearby forests. Most of species are typical in the border of the wood. The strings of hay is a optimal bioengineering solution to collect the fine soil, to stabilize eroded slopes and to develop a natural vegetation in a short time and protect small sized slopes and embankments especially in forests and agricultural landscape.