

## **Efficiency of rice straw mulch as a soil amendment to reduce splash erosion**

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**Abstract** Splash erosion is caused by the impact of raindrops on the soil surface. Raindrops detach soil particles, alter soil structure and increase soil erosion. Therefore, strategies are required to control the runoff and soil erosion through the control of splash erosion. The most effective measures for reducing soil splash are the use of amendments to improve and reinforce soil aggregates and/or to deploy physical barriers to minimize raindrop impacts. Straw mulch is a natural amendment that reinforces soil aggregates and reduces soil erosion. The present study examines the efficiency of straw mulch to reduce splash erosion and was conducted using silt-loam soils collected from summer rangeland in the Alborz Mountains, northern Iran. Rainfall simulators were used in the laboratory on 6 m<sup>2</sup> plots to test the utility of soil amendments to reduce erosion. Data from nine splash cups placed on three replicates for each treatment (treated vs bare soil) showed that the straw mulch reduced splash erosion in all directions.

**Key words** Alborz Mountains, Iran; erosion control; mulch; natural amendment; splash erosion