

expresses the standard deviation of the height of a soil surface area within its delineated basic digital elevation model unit. The higher HSD correspond to the greater irregularities of the soil surface shape. Diameter of REA was found to be around 60 times of HSD (in mm).

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## SOIL SURFACE EVOLUTION UNDER DIFFERENT TILLAGE TYPES

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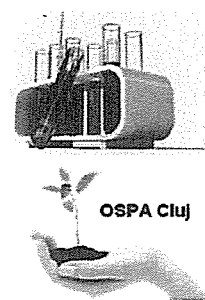
The subject of the presentation is a description of agricultural soil surface evolution under different management practices and influence of surface parameters on erosion by water. Two basic characteristics were assessed – surface roughness and soil consolidation. Stereo photogrammetry served to measure the soil characteristics.

For evaluation of changes of management effects four types of tillage were tested (roller, seed-bed, disk, plough). On the each of tillage type multiple experimental areas were created (for statistical comparison), where the surface roughness and soil consolidation was measured in the time series from cultivation. The data were paired with information on precipitation and temperature and reliability of the results was assessed focusing to variable detail of surface monitoring.

With the using of stereo photogrammetry method relatively accurate results were achieved in evolution of soil characteristics with the error varying for less than 10 % in between tested soil samples. These results are referring to the reliability of the presented method.

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**ABSTRACTS**

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