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## DETERMINATION OF THE EXTENT OF SOIL UNPROTECTED BY VEGETATION IN THE PERIOD OF RAINSTORMS TO ASSESS EROSION RISK

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The article describes the method, the source data, and the results of analyses of bare soil by remote sensing and its relation to soil erosion risk. The method was tested on the parcels of AGRA Řisuty, s. r. o. Data from the satellites Landsat 8 and Sentinel 2 were used for detecting the presence of vegetation cover on each parcel. Furthermore, existing data of seeding and harvest are used for creating training polygons and for calculation of the protective effect of vegetation. Satellite scenes retrieved from the server “Land Viewer” were processed in a GIS. Maximum likelihood supervised classification was performed.

Plots with a total area exceeding 1500 ha were monitored for three growing seasons (2015–2017). The riskiest was the year 2015 when the bare soil occurred up to 1.000 ha during the period of July and August. An important factor for the occurrence of bare soil in the period of the occurrence erosive rainfalls was sowing winter oilseed rape.

The rigors of the approach are the low availability of the cloudless satellite scenes for period of torrential rainfall, and rapid development of the growing cover in the period June–August. The method seems suitable for use by individual agricultural businesses, when uncertainty in determining the soil cover is further reduced by easy availability of calibration data from the field, and easy access to the crop data. The launch of the satellite Sentinel 2 B in the year 2017 also improved the availability of a sufficient amount of data in a consistent time series.