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Soil maps of the Kreybig survey (1935-1951)

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The national soil mapping project initiated and led by Lajos Kreybig was unique, being a national, large-scale survey based on field and laboratory soil analyses and at the same time serving practical purposes. It was carried out between 1935 and 1951 in several stages. The preparation for the survey started in 1933 and the survey almost ended in 1944. The replacement of the sheets destroyed during the war ended in 1951. In the fifties, when the action was successfully completed, Hungary was the first in the world to have such detailed soil information for the whole country, and these maps still represent an exceptionally valuable treasure of soil information.
The survey was carried out with soil pits and boreholes, some of which were deepened to 10 m or to the groundwater level. Three basic types of the observation sites were used in the survey methodology. The most detailed data are provided for ”representative sites”, localized on survey sheets, examined in situ, and sampled for laboratory analysis. “Observed sites” were examined in situ, with description in the explanatory notes, but without laboratory analysis. “Delineator sites” were used for soil patch delineation.
The soil and land use conditions were shown jointly on the maps. 1:25,000 scale topographical map sheets were used as base map both for field reference material and background of the printed maps. Soil mapping units were separated according to overall chemical and physical soil properties of the soil root zone. Three characteristics were attributed to soil mapping units and displayed on the maps; chemical soil properties were indicated by colouring, physical soil properties by shade-lines. Further soil features were determined and measured in soil profiles. The unique feature of the Kreybig method was that one representative and further, non-representative soil profiles occurring within the patch are attached to the soil units of the maps. These profiles jointly provide information on the heterogeneity of the area. Using representative profiles in traditional soil survey is a common solution for linking detailed soil properties originating from soil profiles and the mapping units of crisp soil map representing the pedological variability of land. The display of non-representative soil profiles indicating within soil unit heterogeneity was however a unique approach.