Selected soil profile representing the unique soil-landscape-vineyard constellation in the Tokaj Historical Wine Region

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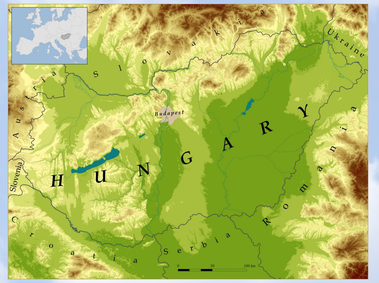

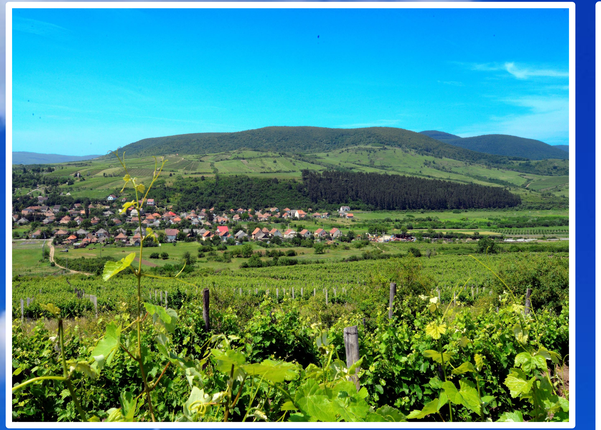

Location: Tolcsva, Petrács
GPS: N 48.293531°, E 21.457283°
Altitude: 170 m
Aspect: West

A$_p$ horizon: in 0–20 cm layer. Dark brown (10YR 3/3), fresh, loose and crumby structure clay-loam in the matrix. Coarse fragment ratio is 25–50% (mostly with 2–6 mm diameter), black coloured debris.

A horizon: in 20–40 cm layer. The dark brown (7,5YR 3/3) material mixed with the under laying yellow-grey-green coloured detritus, the matrix reddish-brown coloured without structure, moist clay. The rock debris ratio is 50–75% (mostly with 2–6 mm diameter). Roots and charred plant remains are in this layer.

C horizon: in 40–180 cm layer. In depth 60 cm rubble andesite can be found, it is not weathered with micro cracks. In depth 110 cm rubble is located with hair cracks. Between the rocks volcanic sand and agglomerate can be found.

Soil type: **Leptic Cambisol Endoskeletic**
Parent material: **rhyolite tuff**

VINUM REGUM 1631 REX VINORUM
TOKAJI
Tokaj Kereskedőház Zrt.

Tokaj is a historical region for botritized dessert wine making, the famed Tokaji wine region has the distinction of being Europe's first classified wine region.

In 2013 the Hungarian Government has decided to elaborate a sustainable quality wine production in the Tokaj region coordinated by the Tokaj Kereskedőház Ltd. Very recently the sustainable quality wine production in the region was targeted, which requires detailed and "terroir-based approach" characterization of viticultural land. In 2014 the characterization of the vineyard land potential was started collecting detailed, up-to-date information on the main environmental factors (geology, geomorphology and soil) which comprise the terroir effect and combined with legacy data of climate.

Tokaj Wine Region includes 27 settlements and is located in Northeast-Hungary, at Hegyalja in Tokaj Mountains, which were formed mostly by Miocene volcanic activity; andesite and rhyolite lavas and tuffs are characteristic. Hegyalja is a pediment surface which dissected by erosional and derasional valleys and basins. The various morphology of this area results diversity in soil types.

Soil plays dominant role determining the viticultural potential, so specific information on soil properties was surveyed and mapped to satisfy these requirements. Soil sampling was carried out in 200 sampling points. The sampling strategy was designed to be as representative as possible taking the existing constraints into consideration based on spatial simulated annealing technique.

Sampling points were assigned to represent the combinations of three basic parameters (slope, aspect and geology) which have high influence on main soil properties. The data collection consisted of field description and tests as well as laboratory measurements of the collected soil and geological samples. The 22 most representative locations were more deeply surveyed by excavating soil profiles. One of the most nice-looking profile has been selected for demonstration to share our soil-landscape-vineyard-wine experiences with the audience