



SETOF

Soil Erosion and TOrrential Flood
Prevention: Curriculum Development at the
Universities of Western Balkan Countries

CHARACTERISTICS OF DYSTRIC CAMBISOL IN THE FOREST MANAGEMENT UNIT "LISINA"

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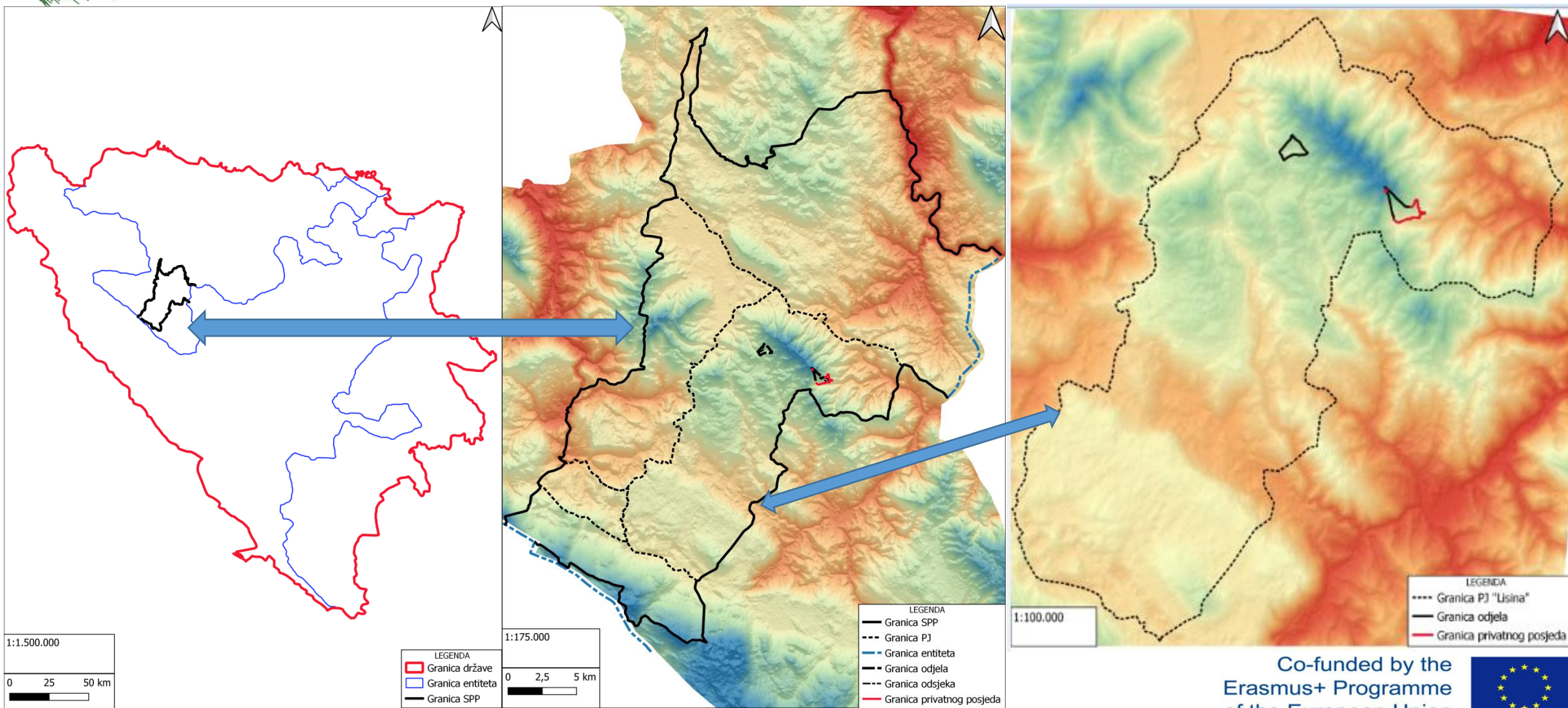
Introduction

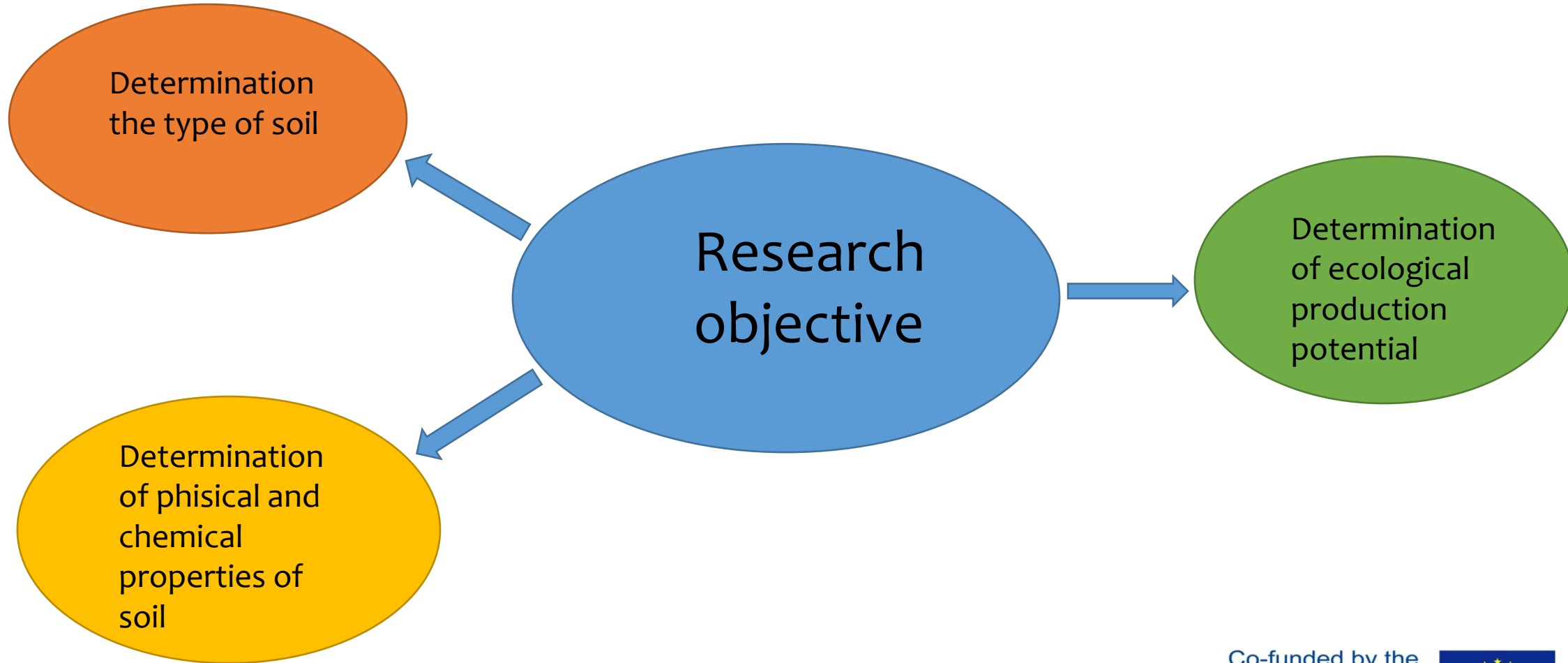
- forest management area “Mrkonjičko” is located in northwestern part BiH, i.e. southwestern part RS
- the total area of the FMA “ Mrkonjičko” to about 30.000 ha
- 80% of the forest area is state-owned and 20% is privately owned
- the surface area of the “Lisina” forest management unit is about 7.840 ha
- the most common are mixed forests of beech, fir and spruce and pure beech forests
- geological and pedological cover in the Lisina mountain is very heterogeneous





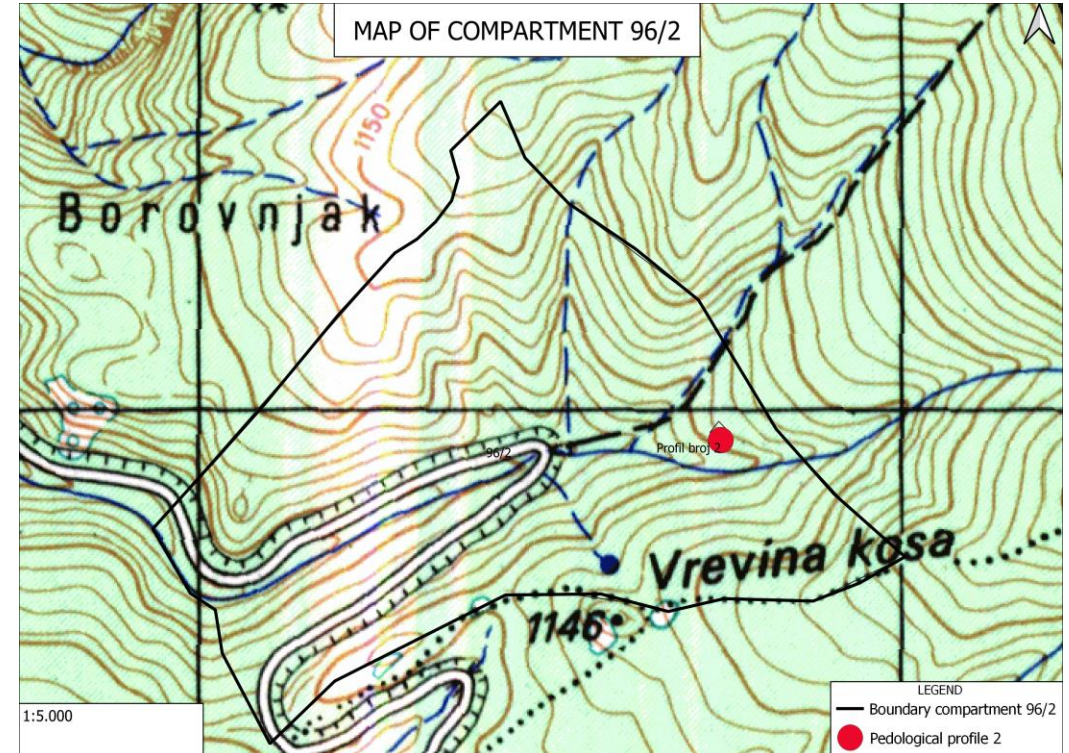
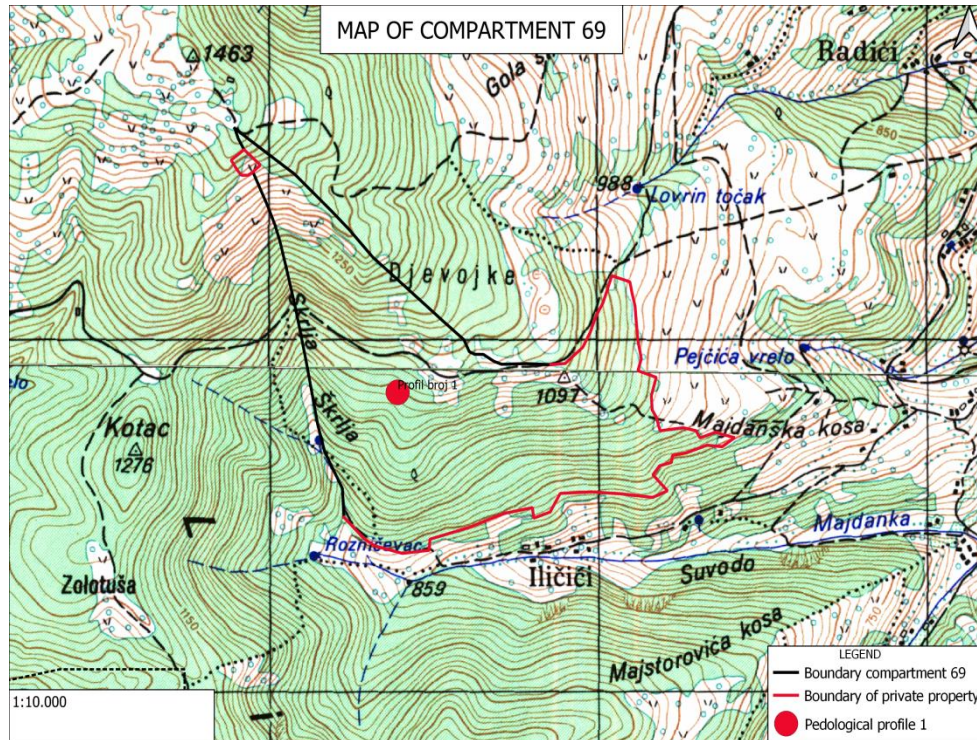
Geographical location of the research object





Material and methods

- research was conducted in two compartments (odjel): 69 and 96/2





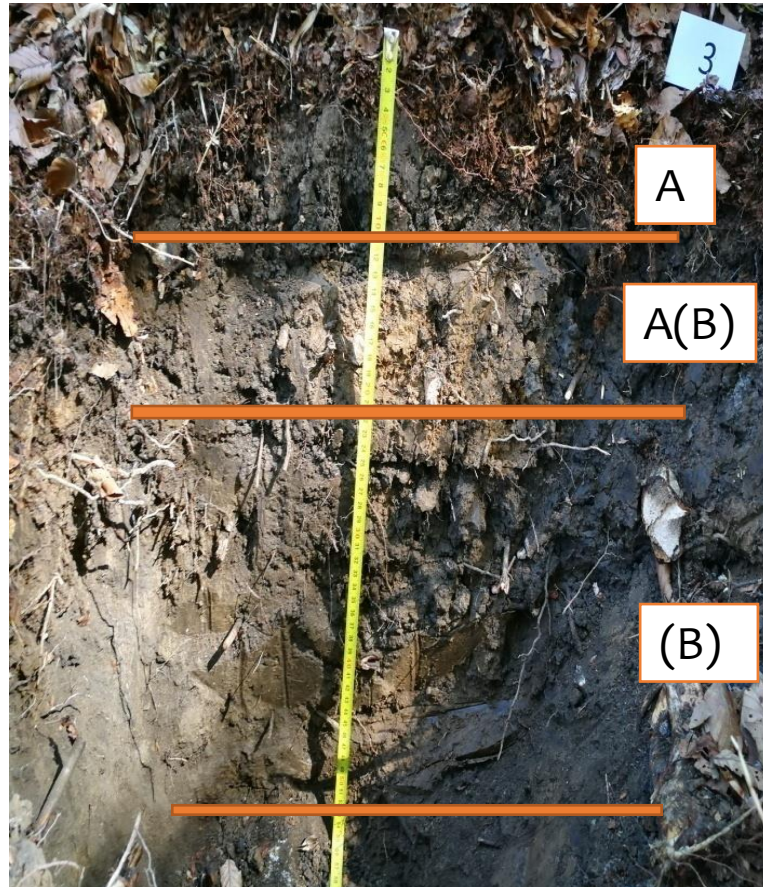
Material and methods

- reconnaissance of the terrain
- opening of the soil profiles
- a total of 2 soil profiles were opened
- the external and internal morphology of the profiles is described
- 5 soil samples were taken for analysis in a damaged state

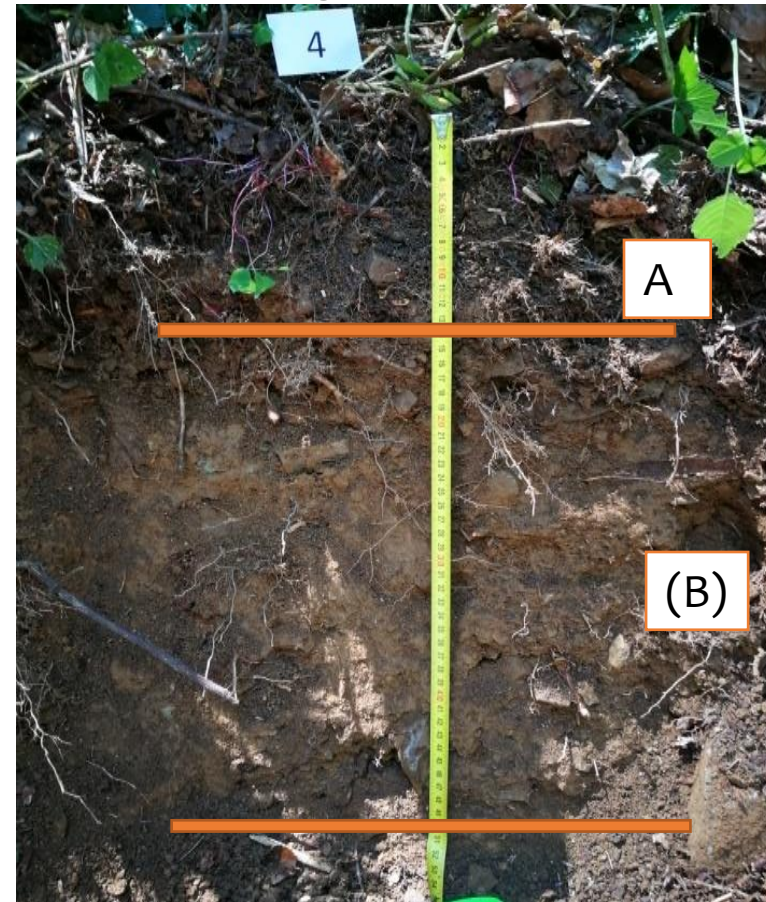


Material and methods

Pedological profile 1



Pedological profile 2





Results and discussion

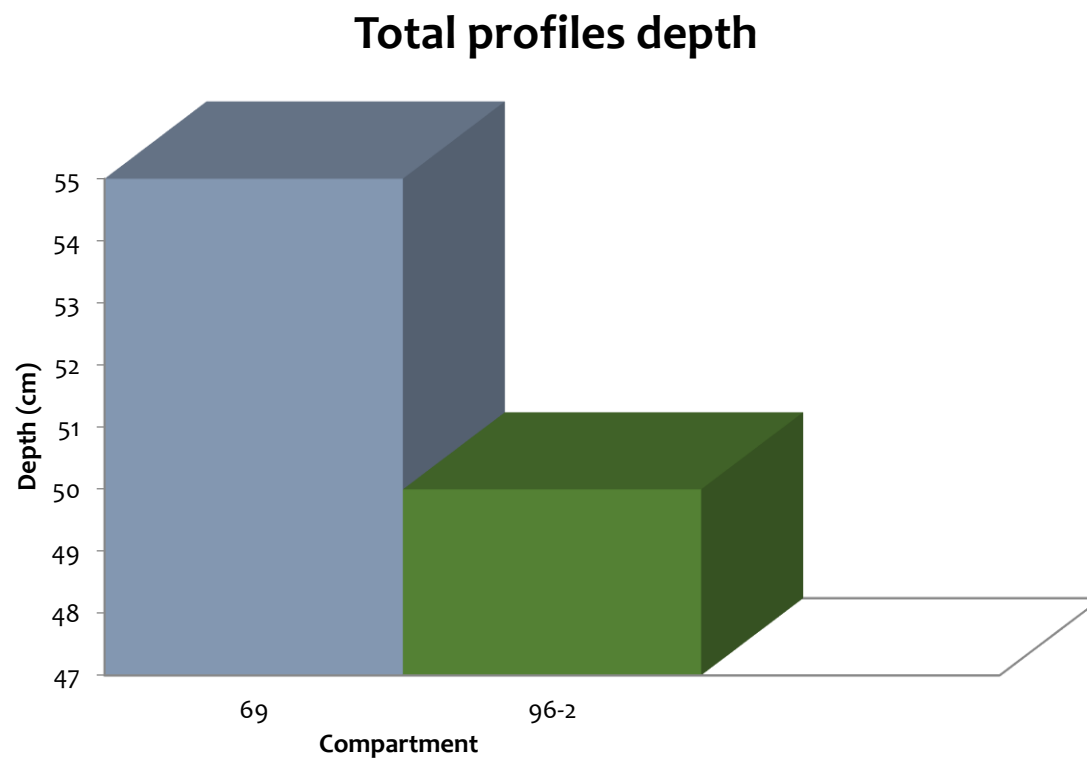
- parent material are sandstones (both profiles)
- the vegetation in compartment 69 is a pure beech stand
- soil in compartment 69 (profile 1) is determined as Cutanic Luvisol (Dystric - WRB) – Illimerized dystric cambisol
- the vegetation in compartment 96/2 is mixed forests of beech, fir and spruce
- soil in compartment 96/2 (profile 2) is determined as Haplic Cambisol (Dystric - WRB) - dystric cambisol
- the research results are shown by horizons A and (B)





Results and discussion

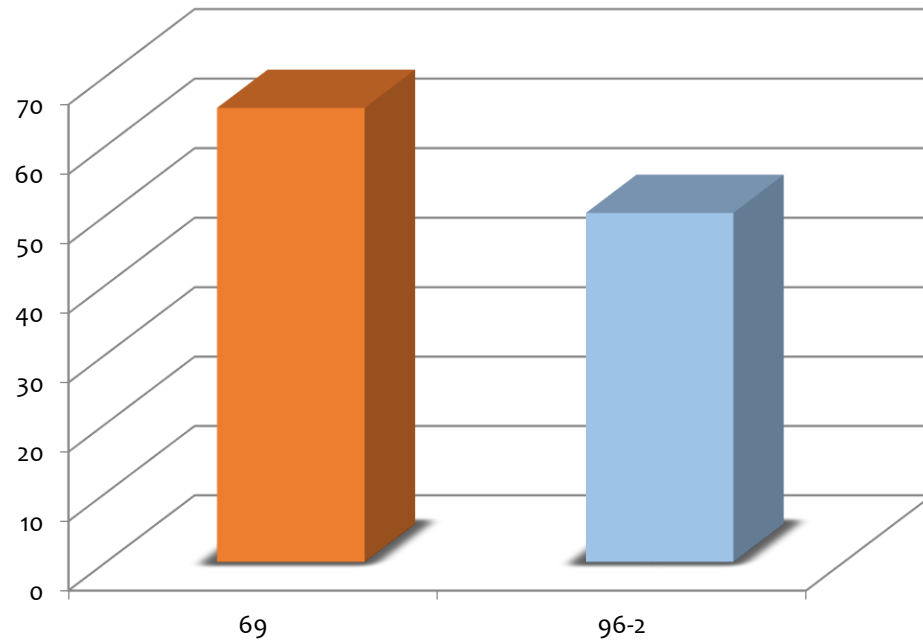
Physical properties - depth



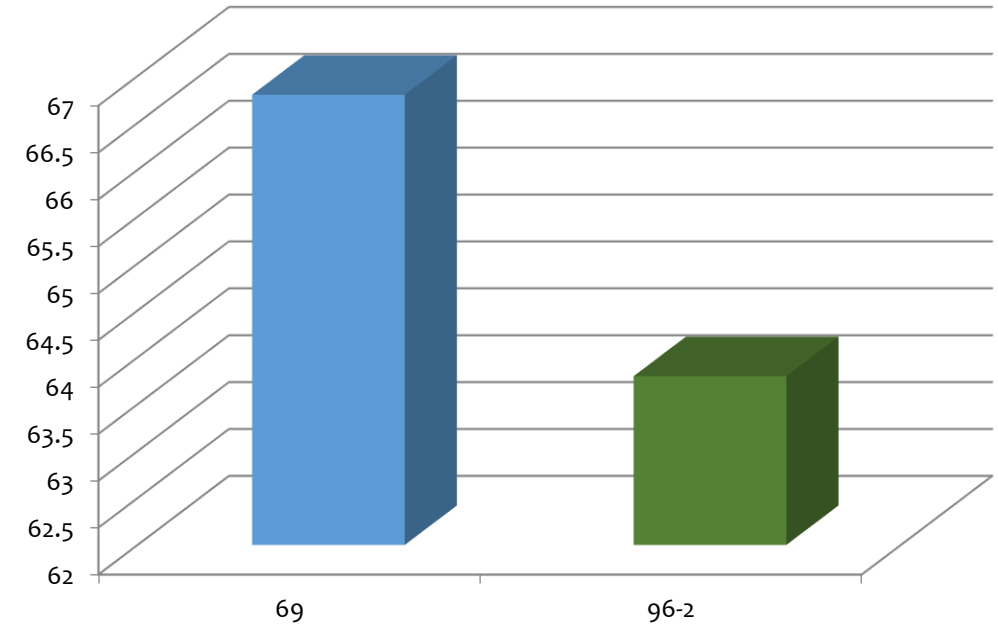
Results and discussion

Physical properties – total clay

Total clay - horizon A (%)



Total clay – horizon (B) (%)

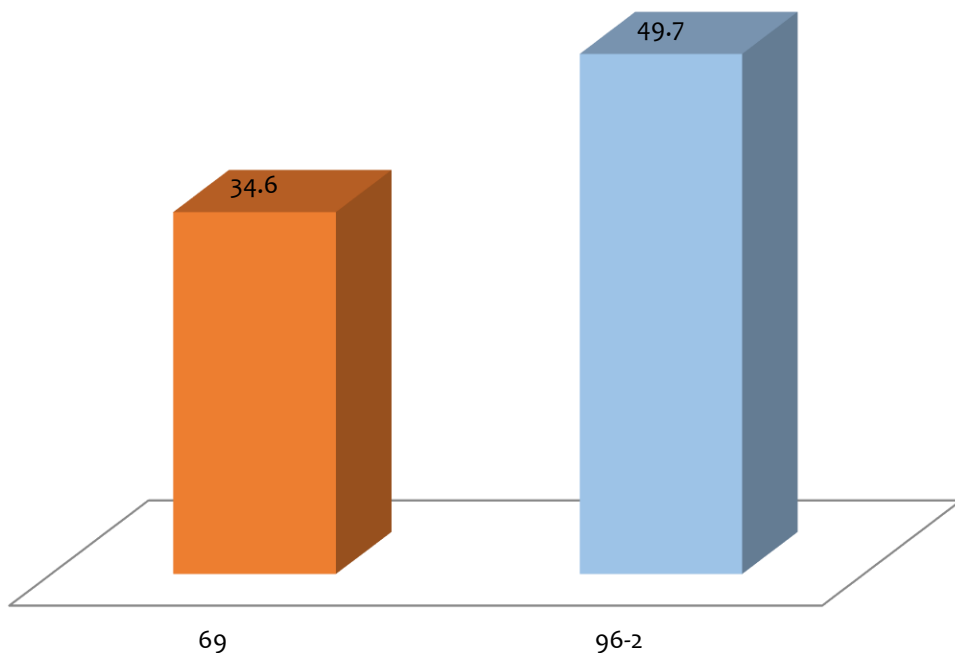




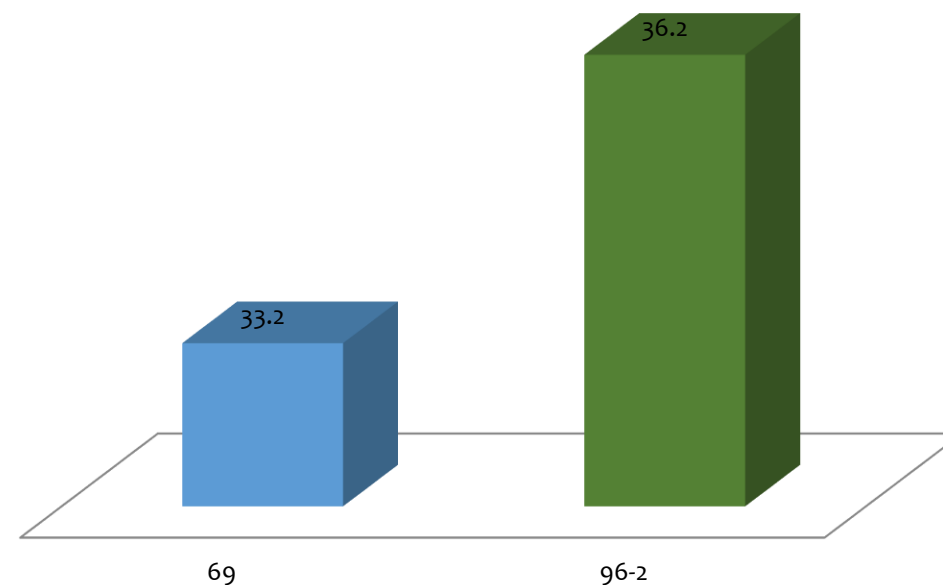
Results and discussion

Physical properties – total sand

Total sand – horizon A (%)



Total sand – horizon (B) (%)

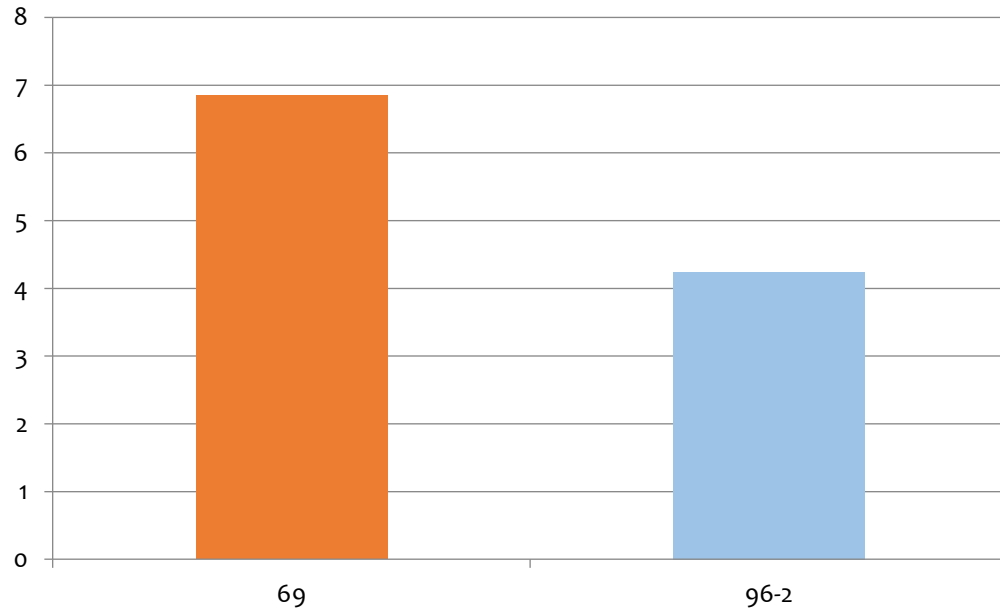




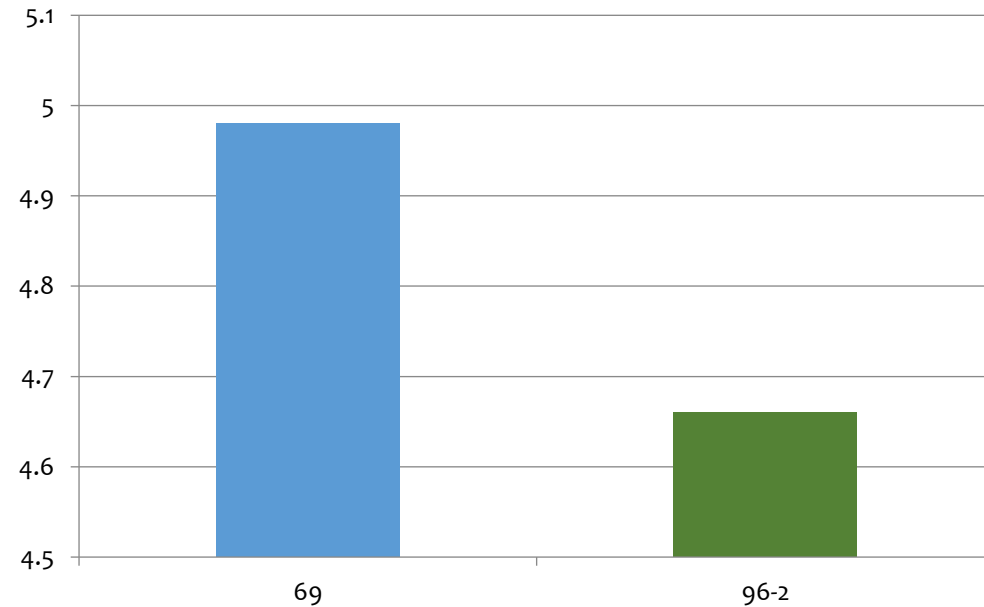
Results and discussion

Chemical properties – pH value

pH - A horizont



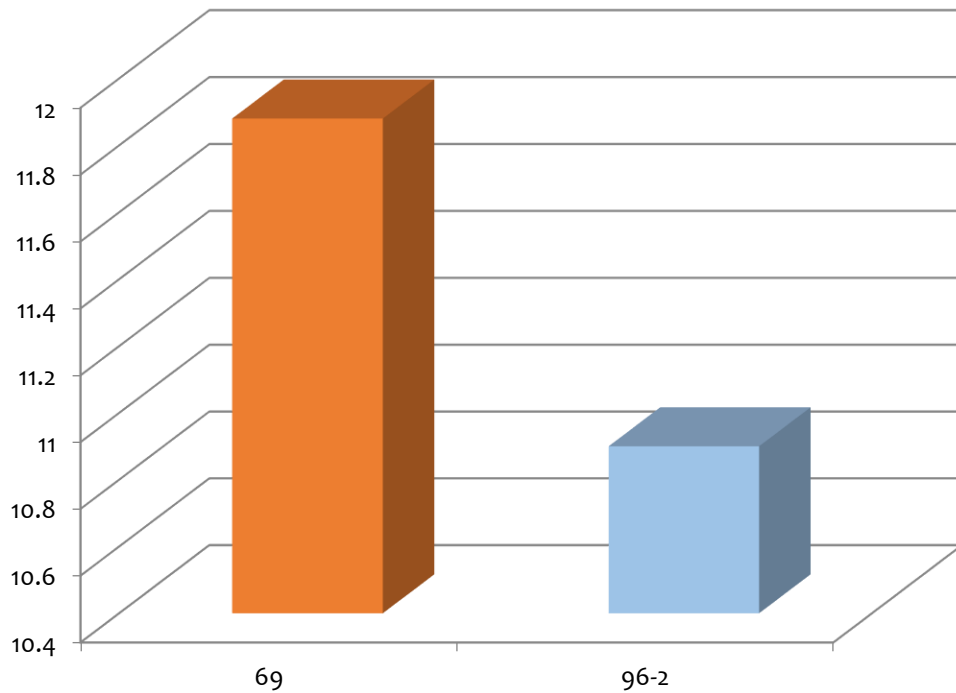
pH - (B) horizont



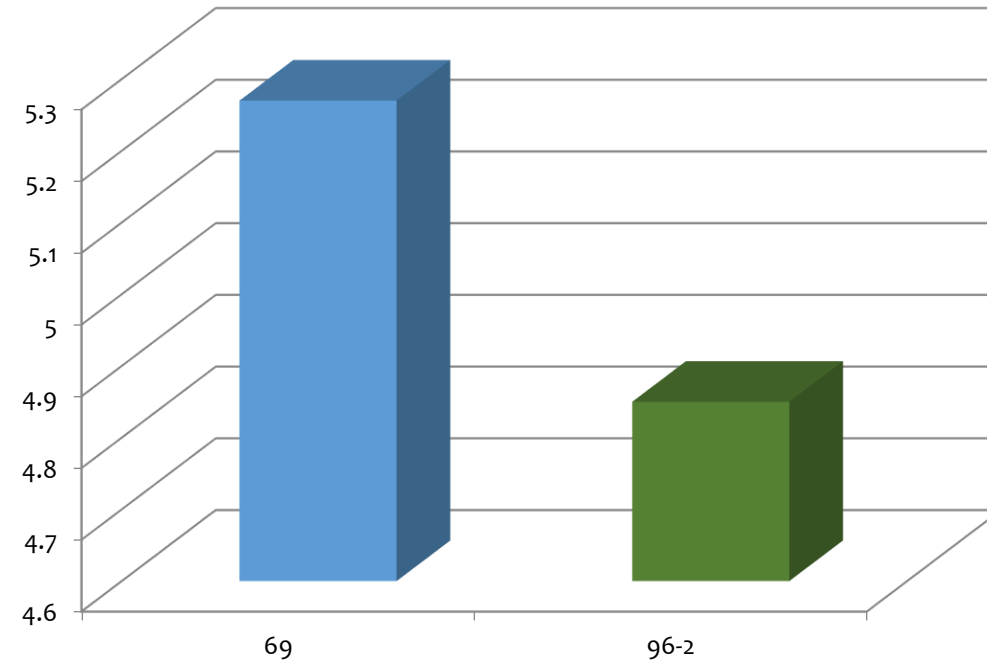
Results and discussion

Chemical properties – humus content

Humus - horizon A (%)



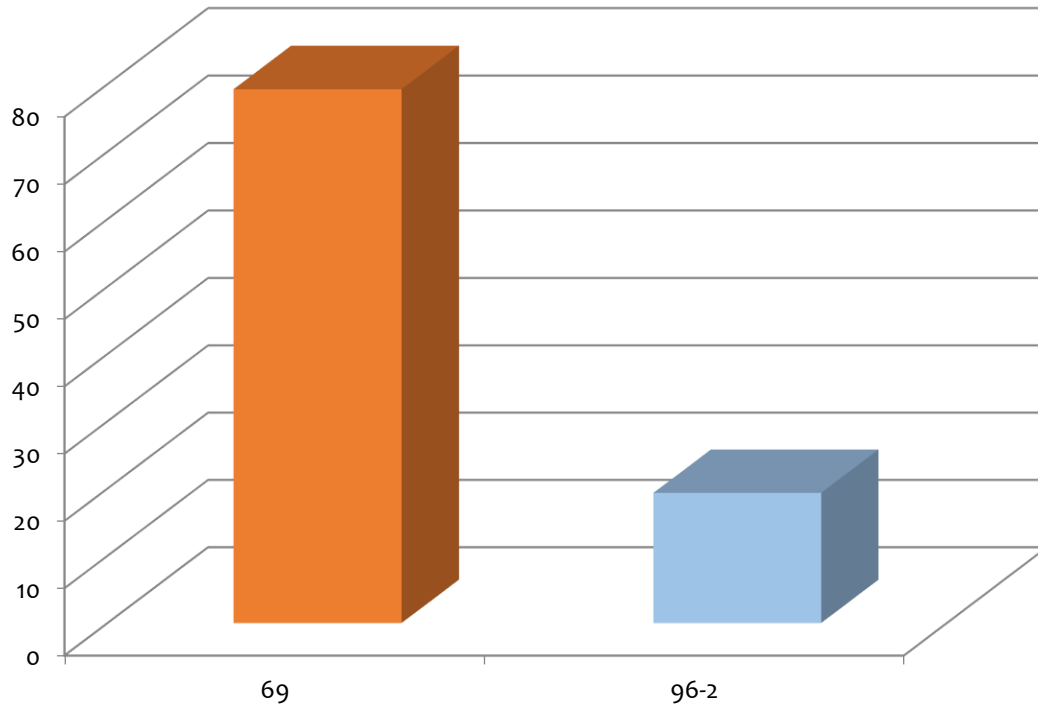
Humus - horizon (B) (%)



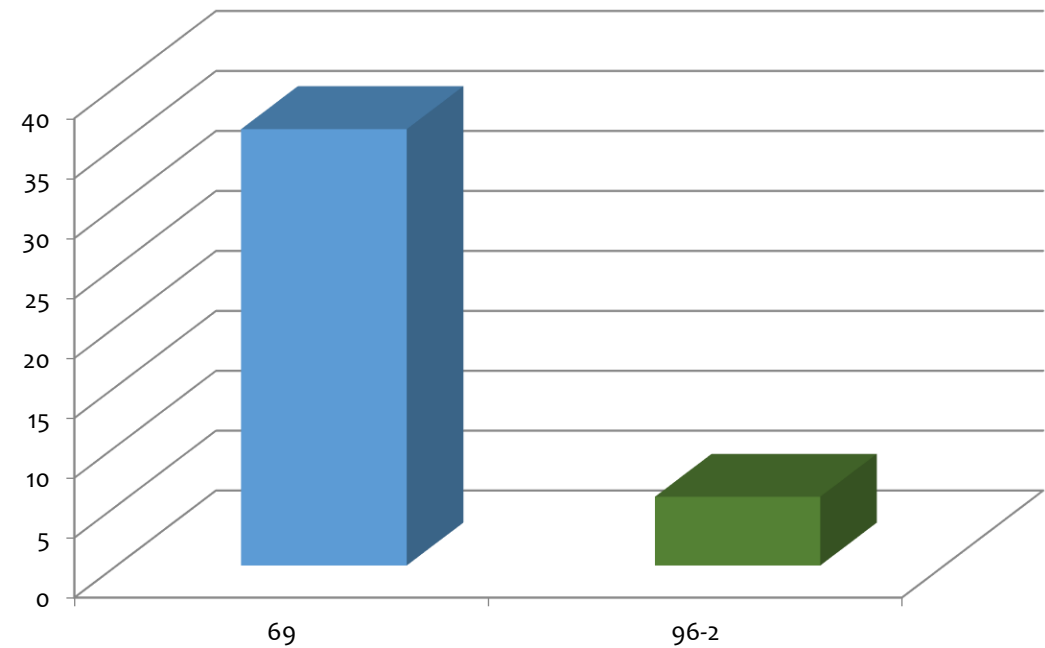
Results and discussion

Chemical properties – degree of base saturation

Degree of base saturation - horizon A (%)



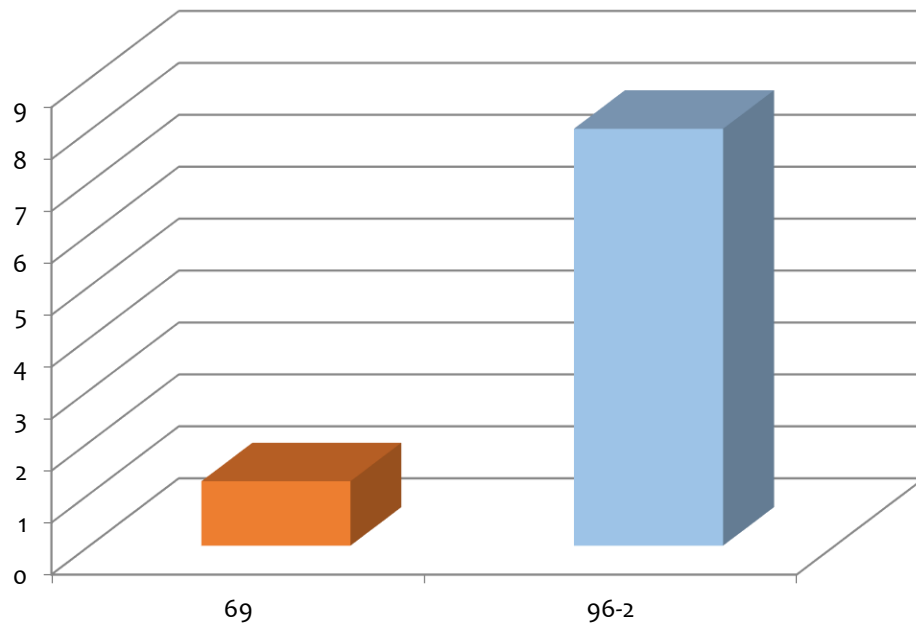
Degree of base saturation - horizon (B) (%)



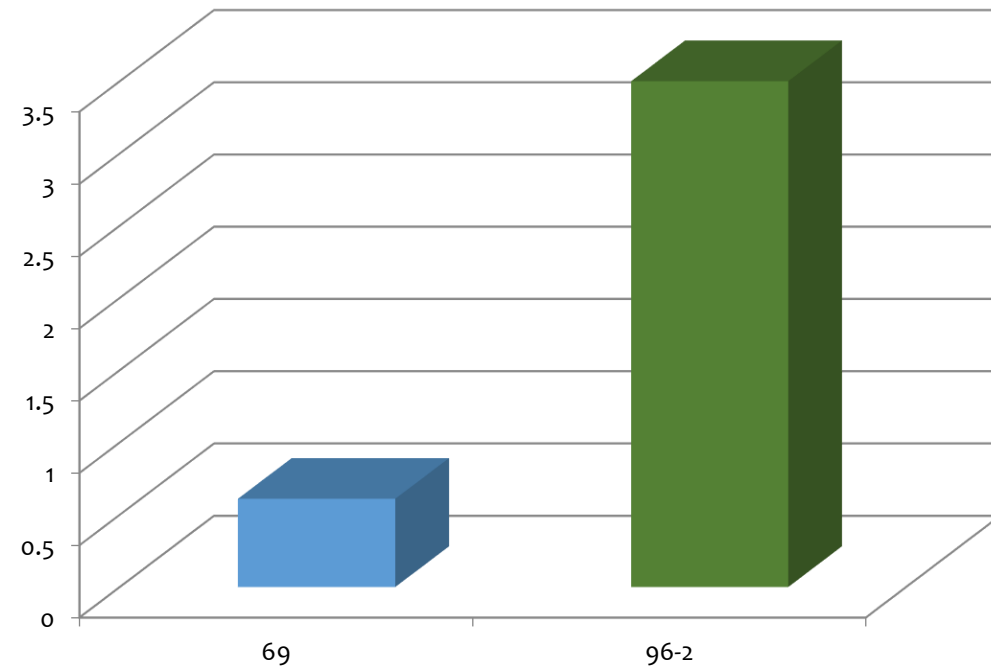
Results and discussion

Chemical properties – content P_2O_5

P_2O_5 - horizon A (mg/100g)



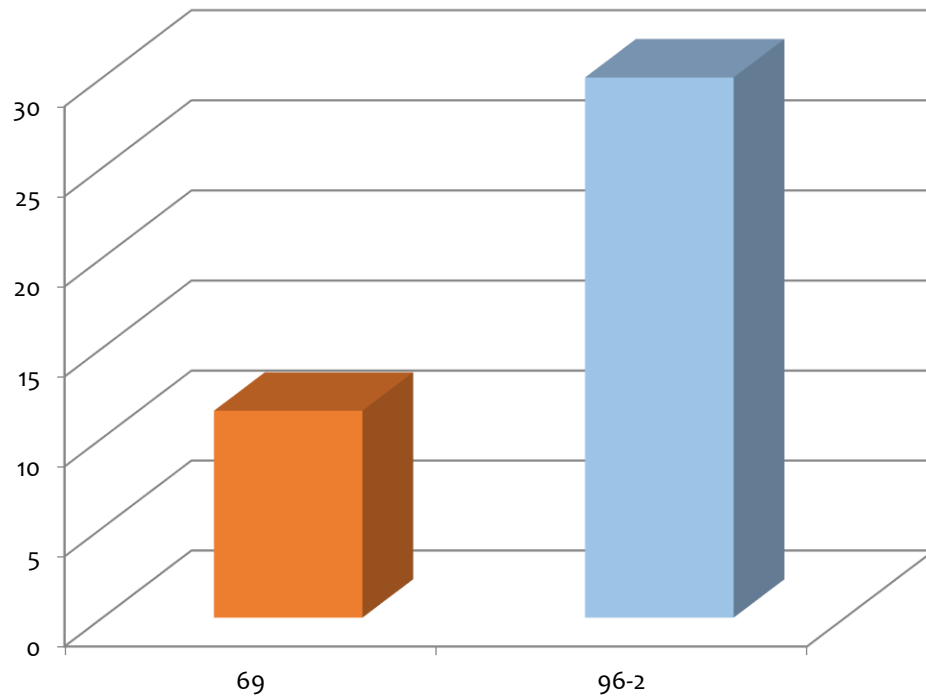
P_2O_5 - horizon (B) (mg/100g)



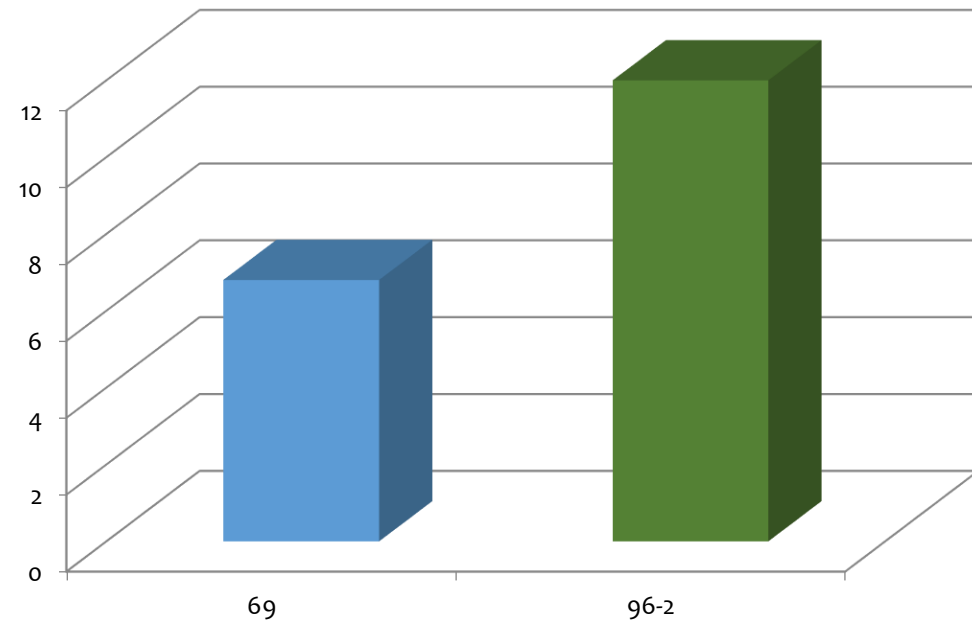
Results and discussion

Chemical properties – content K_2O

K_2O - horizon A (mg/100g)



K_2O – horizon (B) (mg/100g)





Results and discussion

- Cutanic Luvisol (Dystric) has more favorable physical properties (greater depth)
- higher humus content and degree of bases saturation is recorded in profile 1
- Haplic Cambisol (Dystric) has higher level nutrients (P_2O_5 and K_2O)
- the conducted research showed that Cutanic Luvisol (Dystric) in compartment 69 has a higher ecological production potential compared to Haplic Cambisol (Dystric) in compartment 96/2





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