Česká zemědělská univerzita v Praze
Fakulta agrobiologie, potravinových a přírodních zdrojů

DOKTORSKÝ STUDIJNÍ PROGRAM

NÁVRH TÉMATU/PROPOSAL OF THEME

Studijní program/*Study Program*: **Special Agricultural Science**

Studijní obor/*Branch of Study*: **Exploitation and Protection of Natural Resources**

Katedra/*Department of*: **Soil Science and Soil Protection**

Školitel (včetně titulů), email/*Supervisor*, email: doc. Ing. Vít Penížek, Ph.D.

Konzultant (včetně titulů)/*Co-supervisor*: RNDr. Tereza Zádorová, Ph.D.

Forma studia/*Form of Study*: **prezenční**

Typ tématu/*Type of Theme:* **Rámcové**

Téma/*Theme:* Pedogenesis modelling in colluvial soils

Hypotéza/*Hypothesis*:

1. The rates of sediments and character of accumulation will differ according to different soil regions and their environmental settings. The applicability of tested methods will differ
2. Features of recent pedogenesis in the soil sediment can be recognized only by specific combination of methods and can differentiate the historical and recent processes.
3. The profile development and properties distribution will vary in different soil regions according to different intensity and character of sedimentation and pedogenetic processes.

Anotace/Annotation:

The interaction of pedogenetic and geomorphological processes fundamentally ties soils and landforms together. Colluvial soil can serve as an example of an intersection between landscape and soil formation. The challenge in identifying pedogenetic processes in colluvial soils is to distinguish inherited properties from the parent material (soil sediment) and properties originated from pedogenetic processes initiated after the accumulation. The principal goal of the thesis is to introduce conceptual and quantification models of colluvial soil development assessing a complex of processes and factors entering in the formation of this soil in different environmental settings. The study will 1) test and evaluate different geochemical and mineralogical methods for their applicability in the research on colluvial soils formation, 2) identify sedimentary and pedogenetic processes in colluvial soils, asses their intensity, interaction and temporal and environmental context, and 3) develop a mechanistic model quantifying the development of the colluvial profile in time and different environmental settings.

Zdroj financování/Source of: NAZV - Vytvoření podrobných aktuálních map půdních vlastností ČR na základě využití dat Komplexního průzkumu půd a metod digitálního mapování půd

Datum/*Date:* 13.1.2020

Podpis/*Signature:*