

DOKTORSKÝ STUDIJNÍ PROGRAM

NÁVRH TÉMATU/PROPOSAL OF THEME

Studijní program/*Study Program*: **Zemědělská specializace**

Studijní obor/*Branch of Study*: **Využití a ochrana přírodních zdrojů**

Katedra/*Department of*: **vodních zdrojů**

Školitel (včetně titulů), email/*Supervisor*, email: Prof. Ing. Svatopluk Matula, CSc.

Konzultant (včetně titulů)/*Co-supervisor*:

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

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

Téma/Theme:

The influence of different soil treatments and cover crop on hydrophysical properties of the soil profile

Hypotéza/Hypothesis:

Different kinds of soil treatments and cover crop have a significant influence on hydrophysical properties of soil profile, mainly the topsoil layer.

Anotace/Annotation:

Minimum tillage and/or low till is used in many countries. The reason is to reduce the costs of tillage treatment. It is not very clear how these technologies influence the hydrophysical properties of soil profile. This influence on soil properties suppose to be evaluated with respect to basic physical soil behaviours but also including saturated and unsaturated hydraulic conductivity plus the rain intensity influence on the soil erosion. Crop cover, its development and changes within the vegetation season modify significantly the topsoil layer features. There is also an important influence of the plant root system. A goal of the Ph.D. thesis is to judge and evaluate evaluability of these factors. The theme is strictly linked with the long-term activities of the department. The activities started in 1994 and the data sets since that time are available. The experiments has been realised on the experimental field belonging to the Research Institute for Plant Production, Prague – Ruzyně. Data sets are available since 1994.

Zdroj financování/Source of: NAZV QK1910086

Datum/Date: 13.1.2020

Podpis/Signature: