

8. Appendices

Appendix 1: The table of differences of water retention among the land uses.

Appendix 2: Soil sampling both disturbed and undisturbed soil samples

Appendix 3: Laboratory experiments

Appendix 1: The table of differences of water retention among the land uses.

Land uses	Depth	30 min	120 min	24 hours	Total (0-24 h)
	cm	%	%	%	%
Cropland	0-10	9.69±2.40	5.19±0.76	10.13±2.23	25.02 ±4.76
	10-20	8.26±2.02	4.63±0.96	9.27±1.99	22.16±4.78
	20-30	6.39±0.63	3.91±0.56	8.02±0.95	18.33±1.93
Grassland	0-10	5.14±1.24	3.24±0.75	6.92±1.20	15.32±2.9
	10-20	5.68±1.14	3.25±0.67	7.01±0.99	15.94±2.47
	20-30	6.29±1.13	3.30±1.06	7.10±0.91	16.69±2.42
Forestland	0-10	8.34 ±2.68	5.68±1.53	13.73±3.87	27.76±7.96
	10-20	8.80±2.90	5.56±1.12	12.44±2.64	26.80±6.01
	20-30	9.49 ±4.38	5.46±0.85	11.07±1.85	26.03±5.94

Water Retention (%)

Depth (cm)	Cropland	Grassland	Forestland	p_value
0-10	25.01 ±4.76 ^a	15.31 ± 2.90 ^b	27.76±7.96 ^a	0.011*
10-20	22.16±4.78 ^{ab}	15.94±2.47 ^b	26.80±6.01 ^a	0.010*
20-30	18.33 ±1.93 ^b	16.89 ±2.42 ^b	26.03±5.94 ^a	0.005**
0 – 30	21.83±4.71 ^b	15.98±2.48 ^c	26.86±6.24 ^a	0.000***

Appendix 2: Soil sampling both disturbed and undisturbed soil samples



A. Disturbed soil sample



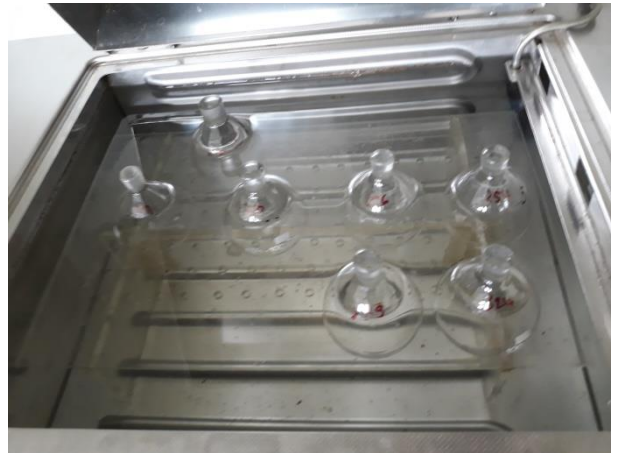
B. Undisturbed soil sample

Appendix 3. Laboratory experiment

Appendix 3.1: Laboratory determination of soil particle density determination



A. Weighted soil sample



B. Pycnometer with distilled water



C. Soil suspension in pycnometer



D. Weighted soil suspension

Appendix 3.2: Water retention determination



A. Soaked soil samples

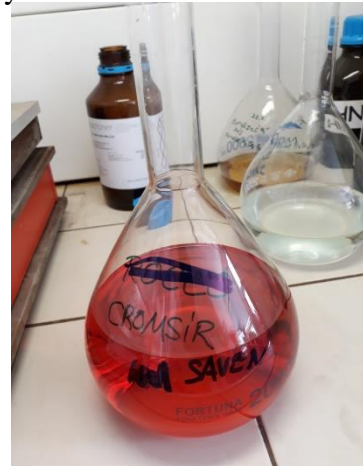


B. Determined water retention by time interval

Appendix 3.3: Organic carbon determination in laboratory



A. Weighted soil samples



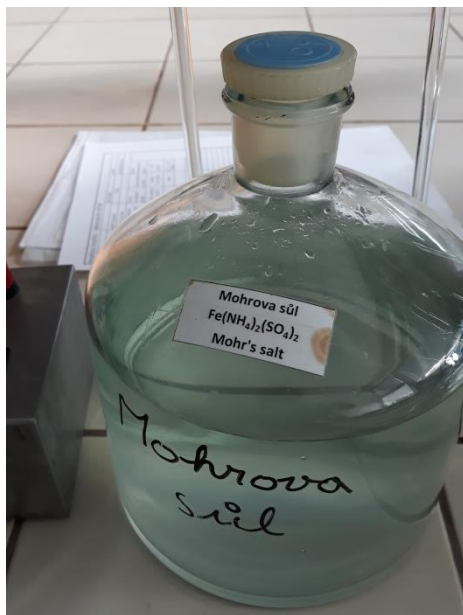
B. Dichromate solution ($K_2Cr_2O_7$)



D. Titration with Mohr salt ($(NH_4)_2Fe(SO_4)_2$)



C. Heated soil suspension



A. Mohr salt ($(NH_4)_2Fe(SO_4)_2$)

Appendix 3.4: pH determination in laboratory

