

## ON-LINE SUPPLEMENTARY MATERIAL

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**On-line Suppl. Tab. 1.** The laboratory methods used for analysing the soil chemical properties.

Soil laboratory analyses	Method
Soil preparation	ISO 11464:2006
pH 1 M KCl	modified ISO 10390
Organic C	HRN ISO 10694:2004
Organic N	HRN ISO 13878:2004
Organic S	HRN ISO 15178:2005
Plant available P	Ammonium lactate (Egner et al. (1960)); spectrophotometry
Plant available K	Ammonium lactate (Egner et al. (1960)); flame photometry
Soil organic matter	Škorić (1982)
Total Mn	HRN EN ISO 13196:2015
Total Zn	HRN EN ISO 13196:2015
Total Fe	HRN EN ISO 13196:2015
Total Ni	HRN EN ISO 13196:2015
Total Cu	HRN EN ISO 13196:2015

**On-line Suppl. Tab. 2.** Results of soil chemical analyses. Grassland and forest samples sharing a sample number represent a single pair (i.e. block); pH 1M KCl – soil reaction,  $K_A$  – plant available potassium,  $P_A$  – plant available phosphorus, TN – soil organic nitrogen, TS – soil organic sulfur, Ca – soil total calcium, Mn – soil total manganese, Ni – soil total nickel, Cu – soil total copper, Zn – soil total zinc, Fe – soil total iron, SOC – soil organic carbon, C:N – soil carbon to nitrogen ratio, C:S – soil carbon to sulfur ratio, N:S – soil nitrogen to sulfur ratio, SOM – soil organic matter, CV – coefficient of variation.

Sample	pH 1 M KCl	$K_A$ mg (100 g) <sup>-1</sup>	$P_A$ mg (100 g) <sup>-1</sup>	TN g kg <sup>-1</sup>	TS g kg <sup>-1</sup>	Mn mg kg <sup>-1</sup>	Ni mg kg <sup>-1</sup>	Cu mg kg <sup>-1</sup>	Zn mg kg <sup>-1</sup>	Fe g kg <sup>-1</sup>	SOC g kg <sup>-1</sup>	C:N	C:S	N:S	SOM g kg <sup>-1</sup>
Grassland 1	5.8	10.0	1.7	3.5	0.7	1496.0	78.5	51.5	131.0	39.9	39.1	11	53	4.7	67.4
Grassland 2	5.1	12.2	0.9	3.3	0.7	715.0	61.0	35.0	101.5	33.2	38.0	11	55	4.8	65.6
Grassland 3	5.5	38.3	1.5	2.9	0.7	1173.5	50.0	30.5	94.5	35.3	34.1	12	52	4.4	58.8
Grassland 4	5.5	6.4	0.9	4.6	0.9	1122.0	115.0	55.5	162.5	50.4	53.9	12	59	5.1	92.9
Grassland 5	4.9	14.9	1.2	3.9	0.8	721.5	76.5	34.5	118.5	39.8	48.6	13	64	5.1	83.9
Grassland 6	5.3	24.6	1.4	2.7	0.6	1115.5	45.5	44.5	94.5	36.4	32.1	12	51	4.3	55.3
Mean	5.4	17.7	1.3	3.5	0.7	1057.3	71.1	41.9	117.1	39.2	41.0	12	56	4.7	70.7
CV (%)	5.5	60.8	23.5	18.2	12.9	25.7	32.6	22.1	20.7	14.2	19.0	3.8	8.0	6.5	19.0
Forest 1	5.5	22.5	1.2	4.0	1.2	982.0	75.5	38.0	116.5	38.1	59.6	15	51	3.4	102.7
Forest 2	5.5	24.6	2.6	2.7	0.7	1038.5	78.5	43.0	128.5	40.9	41.4	15	62	4.1	71.3
Forest 3	6.7	36.8	1.8	3.9	0.8	1338.5	44.0	110.0	104.0	32.5	59.1	15	76	5.0	101.8
Forest 4	5.8	17.3	1.0	3.7	0.7	730.0	72.0	38.0	106.5	37.0	54.7	15	73	4.9	94.3
Forest 5	4.0	17.6	1.3	3.1	0.7	836.5	51.0	30.0	96.0	32.1	54.0	17	74	4.3	93.1
Forest 6	4.6	27.7	2.9	4.9	0.8	1120.5	51.5	31.0	99.0	33.3	75.3	15	89	5.8	129.9
Mean	5.4	24.4	1.8	3.7	0.8	1007.7	62.1	48.3	108.4	35.7	57.4	16	71	4.6	98.9
CV (%)	17.6	29.8	43.7	20.6	23.8	21.3	24.0	63.3	11.2	10.0	19.1	6.0	18.2	18.2	19.2