

# CONTENTS



LIST OF ABBREVIATIONS	5
PREFACE	7
<b>1. INTRODUCTION</b>	<b>9</b>
1.1 Agroforestry in the Carpathians silvopastoral system	9
1.2 Evaluation of mountain pastures quality forming the landscape archetype	12
1.3 Secondary succession of spontaneous flora after deforestation and self-reforestation	14
1.4 Impact of pedocompaction on soil attributes and pasture aboveground phytomass	16
1.5 Different agronomical management regimes of biodiversity of mountain ecosystem	16
1.6 Degradation under the influence of soil compaction at the pastures	17
1.7 Microscopic and keratinophilic fungi and ergosterol in soil	18
1.8 Restoration and phytoremediation of damaged pastures	20
<b>2. MATERIAL AND METHODS</b>	<b>22</b>
2.1 Study locality	22
2.2 Variants	26
2.3 Field activities, sward and laboratory analyses	27
2.4 Evaluation of the grassland quality on the study sites	31
2.5 Statistical analyses	31
<b>3. RESULTS AND DISCUSSION</b>	<b>33</b>
3.1 Carpathian landscape as a cultural phenomenon	33
Cultural landscape	33
The historical development and research of mountain sheep milk farming in the Carpathians	33
Mountain sheep milk farming – significant phenomenon in the Carpathian landscape	34
Pastures influenced by mountain sheep farming – archetype of the Carpathian landscape	34

Downfall of archetype - loss of the cultural phenomenon of the Carpathians	35
Mountain sheep farming's toponyms in the Carpathian landscape	36
3.2 Secondary succession of spontaneous flora after deforestation/ selfreforestation and the sequestration of the soil organic carbon (SOC)	41
3.3 Different agronomical management regimes of mountain ecosystem biodiversity	44
Floristic composition of grassland	44
Ecological values in aboveground phytomass	47
3.4 Impact of pedocompaction on soil attributes and pasture aboveground phytomass	48
3.5 Isolated species of microscopic and keratinophilic fungi in soil	50
3.6 Evaluation of grassland quality in the Carpathians	59
Romanian Carpathians	59
Ukrainian Carpathians	61
Polish Carpathians	65
Slovak Carpathians	68
3.7 Evaluation of mountain pastures quality forming the landscape archetype	72
3.8 Disturbed grassland after the ecological restoration and phytoremediation	77
<b>4. CONCLUSION</b>	<b>84</b>
<b>5. REFERENCES</b>	<b>86</b>
<b>ABSTRACT</b>	<b>108</b>
<b>ABSTRAKT</b>	<b>111</b>