BOTANICAL SURVEY AT THE GREAT PASTURE OF HAJDÚBAGOS

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Summary: Our botanical survey at the great pasture of Hajdúbagos is a part of a broad research that aims to predict the production of the grass at the given area. As the mentioned pasture is a nature conservation area and its management requires grazing as an important management tool, the prediction of the potential grass yield is essential for determining the optimal number of the grazing animal stock and grazing method, thus the most suitable management strategy. A computer model will act as the basis of prediction as the potential grass production gets easily calculable with it. To create the mentioned computer model, data considering the botanical structure and realized grass production of the pasture, as well as the changing climatic factors are required. To collect the necessary botanical data we accomplished the botanical survey with traditional phytocoenological methods in 2006. In this article we present the results of our survey.

INTRODUCTION

Since significant part of Hungary is under agricultural cultivation it is understandable that nature conservation activity depends on the cooperation with agriculture. The conservation and if it is necessary, the restoration of the protected areas are amongst the important elements of the management methods of these areas. These activities cannot be achieved without ecological farming methods, while a viable agricultural activity could come into existence only with the harmonization of the agricultural and nature conservation interests, as the efficiency of agriculture decisively depends on the state and quality of the environment, and thus of nature resources.

According to Béri *et al.* (2004), from a nature conservation point of view, the grass management systems own the biggest importance of the inland agricultural systems, because great part of the protected plant and animal species are attached to them. From the extensive grasslands in Hungary, more than 200 thousand hectares are under nature protection. In the conservation of these areas grazing animal husbandry could own a determinative role. Evaluating grazing, besides the ancient method of animal husbandry, one of the important ways of economic stock-breeding and production of healthy animal products, the role of the grazing animals in the management of protected grasslands becomes increasingly emphatic as well (Bodó, 2005). The opinion of Stefler and Vinczeffy (2001) is also similar, according to which the grasslands at protected areas have come into consideration recently, as because of the prohibition of among others, fertilizing and other grass management methods, the nature conservation activity enjoys priority. In accordance with Bodó (2005), professionals in nature conservation often state that production is negligible besides this important activity.

However preserving the plant and animal species attached to grasslands is prominently important, conservation is not suitable for it in itself. A well-thought-out grazing system would serve as the key for the preservation as the present plant and animal associations at grasslands are evolved due to the effects of grazing animal husbandry processed throughout centuries.

Methodical grazing upon strict regulation on protected areas is the dominant tool for the management of protected grasslands. As the number of experiences in the field of grass management among the mentioned circumstances is rather bare and extra difficulties should be taken into consideration that are not usual at agricultural grasslands (e.g. yield fluctuation is increasing, the nutrient content of the grass is decreasing, succession starts) modern grass management systems should be worked out (Stefler and Vinczeffy, 2001). Béri *et al.* (2004) also think that the elaboration of a grazing method in connection with a certain protected area is an important research challenge.

The aim of our examinations is to provide the necessary botanical data for the computer model predicting the grass production of the great pasture of Hajdúbagos. The overall purpose of this research is to develop the management strategy of protected grasslands considered optimal which serves simultaneously the economical interests of the local population in connection with production along with the aims of nature conservation.

MATERIALS AND METHODS

The great pasture of Hajdúbagos

The great pasture of Hajdúbagos can be found at the eastern part of Hajdú-Bihar County, south-east from Debrecen, north form the settlement Hajdúbagos. Geographically it is located in the meeting point of three natural landscapes, the South Nyírség, the Alley of the Berettyó-Kálló and the South Hajdúság, indirectly neighbouring the forested Erdőspuszták territory (Baranyi, 2001). Allowing that the area is the most significant habitat country wide of the strictly protected lesser mole rat (*Nannospalax leucodon* - Gyarmathy, 1993), it became a protected area in 1976 called the Lesser Mole Rat Reservation of Hajdúbagos Nature Conservation Area.

The great pasture of Hajdúbagos has a unique nature conservation value, and this area is one of the last extensive pastures reminded on sandy areas in Hungary (HNPI 2003 (Hortobágyi Nemzeti Park Igazgatóság/Hortobágy National Park Directorate)). The non-adequate land-use causes quick succession changes at the area and this negative procession, besides the alteration of the natural vegetation, the closing and standing out of the grass, has numerous deteriorative effects, among others it affects the natural fauna also.

The area is under human impact since ages, according to the archaeological findings it was already inhabited in the Neolithicum (B.C. 5500-3400) (Kozma 1998). In the course of history it was under agricultural utilization almost from the beginnings, in conformity with the different documentations the façade of the land was formed mainly by the extensive, grazing animal husbandry. According to Molnár (2001) and Dorka (2004) it is understandable, as the agricultural potential of the area is rather low thus mainly the grazing land-use is characteristic. However the last one century caused crucial changes. This land-use method ceased virtually or at least it had been pushed to the background, what has a visibly deteriorative effect on the examined area. The present animal stock could consume only a negligible part of the arising biomass that leads to an undesirable accumulation of the organic material at the pasture and causes the appearance of weeds. To be able to suppress weeds, as a part of the area management, mechanical mowing is going on at some area divisions. Mechanical mowing is only an obligate solution and it would be necessary to replace it, what could be reached with the increase of the grazing animal stock (Mazsu 2001).

Examination methods

The botanical survey was carried out according to quadrate method mentioned by Balázs (1949). However the author stated that 1, 4, 9, or 16 square meter sized quadrates could be used for this survey method, he advised to use the 2x2 meter quadrates. Due to the characteristics of the examined pasture we chose the 1x1 meter size. For the sake of the overall research aims, to the test reaping series and the botanical surveys, all together 34, uniformly one square metre sized research quadrates were set. We located the exact geographical location of the quadrates by GPS and represented them on a satellite photograph *(Fig.1)*.

Figure 1. Location of the examination quadrates at the great pasture of Hajdúbagos
Source: own compilation by Google Earth software
BT: dune top; BO: dune side; M: lower location areas; LM: lowest location areas

During the setting of the quadrates we attempted to take into consideration the characteristics of the examination area. Namely, the total area of the great pasture of Hajdúbagos is some 265 hectares, and rather diverse in its relief as the relative micro relief of the area is 5-9 metres. It means that several dunes can be found at the pasture. According to the different altitudinal levels the vegetation differs that effects the fauna distribution also.

We have divided the examination area into four different altitudinal levels, these are the dune top (BT), dune side (BO), lower location areas (M) and lowest location areas (LM). We have counted the proportion of the different altitudinal levels according to each other and to the total area of the pasture, and found that the latitude of the dune tops is the smallest, approximately 12,2 % of the total area. The latitude of the dune sides is approximately 15, 7 % and of the lowest location areas is at about 22,5 % of the total area. The latitude of the lower location areas is the biggest, this level occupies around 28,3 % of the total examination area (all the remaining areas are under water, covered by forest or under cultivation). After all we have stated that 5 quadrates on different dune tops will be enough to be able to do the examination. Thus this altitudinal level was given a unit multiplier. Dune side level was given proportionally a 1.3, lower location area level a 2.3 and the lowest location area level a 1.9 multiplier. So after the multiplication I get 5 quadrates on dune tops, 7 (6.5) quadrates on dune sides, 12 (11.5) quadrates on lower location areas and 10 (9.5) quadrates on lowest location areas. The setout of the 34 quadrates happened in March 2006, in two times. The method of the setout was the so called guided random method, as the different altitudinal levels gave the estimated place of the quadrates but within these territories the correct place of each quadrate was the result of random choice.

RESULTS AND DISCUSSION

We accomplished the first coenological survey in 2006 that reflects the late summer – early autumn aspect. As a result of the botanical survey accomplished in 2006 we have found all together 91 species at the examination area *(Table 2.)*. As we expected a significant part of the species belongs to the *Poaceae* family (20 species – 21.98 %). Species in *Fabaceae* family are also numerous (10 species – 10.99 %).

On the basis of the survey a coenological table *(Table 3.)* was compiled that contains the scientific name, the life form types, the TWR indicator numbers and nature conservation value categories of each species (Simon, 2000), as well as the coverage per cent of the species (D_B) and the total coverage of each plots (B%) (Balázs, 1949). In the case of naming the species we took into account Priszter's plant identification handbook (1998).

According to the nature conservation value categories, from the 91 species found at the great pasture of Hajdúbagos we cannot identify certain species of *Juncus* genus, thus from the other 91 species 6 are association-forming, 28 are accompanying and 5 are pioneer species that refer to natural conditions, while amongst degradation tolerant species 25 are disturbance tolerant and 26 are weed species *(Table 1)*. As it is observable almost half of the found species (43.33%) refer to natural conditions while slightly more (56.66 %) refer to degradation. These data lead us

Table 1. Grouping of the species according to the categories of environmental protection value

Categories of environmental protection value	**Pc.**	**%**
Referring to natural conditions	***39***	***43.33***
association forming species	6	6.67
accompanying species	28	31.11
pioneer species	5	5.55
Referring to degradation	***51***	***56.66***
disturbance tolerant species	25	27.77
weed species	26	28.89
Total species	**90**	**100**

to conclude that the area preserves its seminatural state, but quite strong degradation effect has an influence on it.

Amongst the disadvantageous factors reflecting to the present state of the habitat primarily the effects of the changing climate factors must be mentioned. The milder winters, the warmer summers and simultaneously the observable precipitation deficiency decisively contribute to the expectable transformation – drying out – of the habitat.

Besides the alteration of the natural vegetation, the closing and standing out of the grass - according to under-grazing that occurs at some parts of the pasture - has numerous deteriorative effects among others it affects the natural fauna also.

Other potential threat to several parts of the pasture is the spreading of the neighbouring Robinia wood and its underwood. At some under-grazed area the spreading of *Crataegus monogyna* is another potential endangering factor.

Nevertheless there are under-grazed parts of the examined pasture, the negative effects of over-grazing – due to the non-adequate management of this grassland – is more serious.

To be able to conserve this certain protected pasture the elaboration of a grazing method in an important research challenge. Our botanical survey can provide important data to create the computer model predicting the potential grass yield of the area, which is necessary to develop the optimal management strategy of this and by based on it of other protected grasslands as well.

Table 2. List of species found at the great pasture of Hajdúbagos in 2006

No.	Scientific name
1.	*Achillea collina*
2.	*Achillea millefolium*
3.	*Achillea setacea*
4.	*Ajuga chamaepitys*
5.	*Alopecurus pratensis*
6.	*Ambrosia artemisiifolia*
7.	*Ascelpias syriaca*
8.	*Berteroa incana*
9.	*Brachypodium pinnatum*
10.	*Bromus hordeaceus*
11.	*Campanula rotundifolia*
12.	*Carduus acanthoides*
13.	*Carex humilis*
14.	*Centaurea jacea subsp. angustifolia*
15.	*Cerastium dubium*
16.	*Cichorium intybus*
17.	*Cleistogenes serotina*
18.	*Clinopodium vulgare*
19.	*Conyza canadensis*
20.	*Crepis biennis*
21.	*Cynodon dactylon*
22.	*Dactylis glomerata*
23.	*Daucus carota*
24.	*Digitaria sanguinalis*
25.	*Diplotaxis muralis*
26.	*Diplotaxis tenuifolia*
27.	*Echium vulgare*
28.	*Elymus repens*
29.	*Erodium cicutarium*
30.	*Eryngium campestre*
31.	*Euphorbia cyparissias*
32.	*Festuca arundinacea*
33.	*Festuca ovina*
34.	*Festuca pseudovina*
35.	*Festuca rupicola*
36.	*Fragaria viridis*
37.	*Galeopsis ladanum*
38.	*Galium verum*
39.	*Geranium molle*
40.	*Glechoma hederacea*
41.	*Gratiola officinalis*
42.	*Gypsophila muralis*
43.	*Hypericum perforatum*
44.	*Juncus sp.*
45.	*Knautia arvensis*
46.	*Linaria vulgaris*
47.	*Lolium perenne*
48.	*Lotus corniculatus*
49.	*Lotus maritimus*
50.	*Medicago lupulina*
51.	*Mentha aquatica*
52.	*Mentha longifolia*
53.	*Ononis spinosa*
54.	*Petrorhagia prolifera*
55.	*Peucedanum carvifolia*
56.	*Phleum pratense*
57.	*Pimpinella saxifraga*
58.	*Plantago lanceolata*
59.	*Plantago major*
60.	*Plantago maritima*
61.	*Poa angustifolia*
62.	*Poa pratensis*
63.	*Polygonum arenarium*
64.	*Polygonum aviculare*
65.	*Potentilla anserina*
66.	*Potentilla argentea*
67.	*Potentilla incana*
68.	*Puccinellia distans*
69.	*Puccinellia limosa*
70.	*Ranunculus pedatus*
71.	*Ranunculus polyanthemos*
72.	*Ranunculus repens*
73.	*Robinia pseudoacacia*
74.	*Rorippa austriaca*
75.	*Rumex acetosella*
76.	*Salvia nemorosa*
77.	*Senecio erucifolius subsp. tenuifolius*
78.	*Setaria pumila*
79.	*Silene otites*
80.	*Stellaria graminea*
81.	*Taraxacum officinale*
82.	*Teucrium scordium*
83.	*Thymus odoratissimus*
84.	*Tragopogon dubius*
85.	*Trifolium arvense*
86.	*Trifolium hybridum*
87.	*Trifolium ornithopodioides*
88.	*Trifolium pratense*
89.	*Trifolium repens*
90.	*Veronica prostrata*
91.	*Viola tricolor subsp. tricolor*

Table3. List of species according to the examination quadrates with their nature conservation value categories, TWR indicator number, the coverage per cent of the species (D_B) and the total coverage of each plots (B%)

❑	*Pc.*	*Scientific name*	*NCV*	*Life form*	*T*	*W*	*R*	D_B	*B%*
BT1	1	*Conyza canadensis*	GY	Th-TH	0	4	0	2	
	2	*Cynodon dactylon*	TZ	G(H)	6k	3	0	8	
	3	*Festuca pseudovina*	TZ	H	5k	2	0	4	
	4	*Potentilla incana*	K	H	6a	1	5	1,5	
	5	*Rumex acetosella*	K	H(G)	5	2	2	0,2	
	6	*Thymus odoratissimus*	K	Ch	5	2	3	1,5	
	7	*Centaurea jacea subsp. angustifolia*	TZ	H	5a	6	0	0	
	8	*Eryngium campestre*	TZ	H	7	2	4	0	
	9	*Crepis biennis*	K	Th	5a	4	0	1	
	10	*lichen*						0	
							Σ	**18,2**	**56,88**
BT2	1	*Cynodon dactylon*	TZ	G(H)	6k	3	0	8	
	2	*Euphorbia cyparissias*	GY	H(G)	5k	3	4	1,5	
	3	*Festuca pseudovina*	TZ	H	5k	2	0	4	
	4	*Berteroa incana*	GY	Th-H	6	3	4	0	
	5	*Potentilla incana*	K	H	6a	1	5	0,2	
	6	*Rumex acetosella*	K	H(G)	5	2	2	0,2	
	7	*Eryngium campestre*	TZ	H	7	2	4	0	
	8	*Crepis biennis*	K	Th	5a	4	0	2	
							Σ	**15,9**	**49,69**
BT3	1	*Petrorhagia prolifera*	K	Th	6a	1	0	0,2	
	2	*Cynodon dactylon*	TZ	G(H)	6k	3	0	8	
	3	*Euphorbia cyparissias*	GY	H(G)	5k	3	4	2	
	4	*Festuca pseudovina*	TZ	H	5k	2	0	3	
	5	*Taraxacum officinale*	GY	H	0	5	0	0	
	6	*Berteroa incana*	GY	Th-H	6	3	4	0,2	
	7	*Polygonum arenarium*	TP	Th	6k	0	0	0,2	
	8	*Thymus odoratissimus*	K	Ch	5	2	3	0,5	
	9	*Eryngium campestre*	TZ	H	7	2	4	0	
	10	*Crepis biennis*	K	Th	5a	4	0	3	
	11	*lichen*						0,5	
							Σ	**17,6**	**55,00**
BT4	1	*Conyza canadensis*	GY	Th-TH	0	4	0	0	
	2	*Euphorbia cyparissias*	GY	H(G)	5k	3	4	0,5	
	3	*Festuca pseudovina*	TZ	H	5k	2	0	3	
	4	*Potentilla incana*	K	H	6a	1	5	0,2	
	5	*Rumex acetosella*	K	H(G)	5	2	2	0,5	
	6	*Eryngium campestre*	TZ	H	7	2	4	0	
	7	*Crepis biennis*	K	Th	5a	4	0	2	
	8	*Silene otites*	K	H	5k	2	4	0	
	9	*lichen*						0,5	
							Σ	**6,7**	**20,94**
BT5	1	*Conyza canadensis*	GY	Th-TH	0	4	0	0,2	
	2	*Cynodon dactylon*	TZ	G(H)	6k	3	0	3	
	3	*Festuca pseudovina*	TZ	H	5k	2	0	3	
	4	*Potentilla incana*	K	H	6a	1	5	0,2	
	5	*Rumex acetosella*	K	H(G)	5	2	2	0	
	6	*Salvia nemorosa*	K	H	6k	2	4	0	
	7	*Gypsophila muralis*	TP	Th	5a	2	2	0	
	8	*Eryngium campestre*	TZ	H	7	2	4	0	
	9	*Tragopogon dubius*	TZ	TH	6k	4	0	0	
	10	*Crepis biennis*	K	Th	5a	4	0	2	
	11	*Trifolium arvense*	GY	Th	5a	2	4	0	
	12	*lichen*						0,2	
							Σ	**8,6**	**26,88**
BO1	1	*Conyza canadensis*	GY	Th-TH	0	4	0	2	
	2	*Cynodon dactylon*	TZ	G(H)	6k	3	0	12	
	3	*Festuca pseudovina*	TZ	H	5k	2	0	4	
	4	*Polygonum arenarium*	TP	Th	6k	0	0	0	

	5	*Potentilla incana*	*K*	*H*	*6a*	*1*	*5*	*1,5*	
	6	*Centaurea jacea subsp. Angustifolia*	*TZ*	*H*	*5a*	*6*	*0*	*0*	
	7	*Eryngium campestre*	*TZ*	*H*	*7*	*2*	*4*	*0*	
	8	*Poa angustifolia*	*E*	*H*	*5*	*3*	*4*	*0,2*	
	9	*lichen*						*0,5*	
							Σ	***20,2***	***63,13***
BO2	*1*	*Conyza canadensis*	*GY*	*Th-TH*	*0*	*4*	*0*	*1*	
	2	*Cynodon dactylon*	*TZ*	*G(H)*	*6k*	*3*	*0*	*2*	
	3	*Euphorbia cyparissias*	*GY*	*H(G)*	*5k*	*3*	*4*	*1,5*	
	4	*Festuca pseudovina*	*TZ*	*H*	*5k*	*2*	*0*	*2*	
	5	*Potentilla incana*	*K*	*H*	*6a*	*1*	*5*	*1*	
	6	*Eryngium campestre*	*TZ*	*H*	*7*	*2*	*4*	*0*	
	7	*Hypericum perforatum*	*TZ*	*H*	*5a*	*3*	*0*	*0*	
	8	*Crepis biennis*	*K*	*Th*	*5a*	*4*	*0*	*1,5*	
	9	*lichen*						*0,2*	
							Σ	***9,2***	***28,75***
BO3	*1*	*Cynodon dactylon*	*TZ*	*G(H)*	*6k*	*3*	*0*	*6*	
	2	*Diplotaxis muralis*	*GY*	*TH-H*	*5*	*3*	*4*	*0*	
	3	*Euphorbia cyparissias*	*GY*	*H(G)*	*5k*	*3*	*4*	*1*	
	4	*Festuca pseudovina*	*TZ*	*H*	*5k*	*2*	*0*	*3*	
	5	*Eryngium campestre*	*TZ*	*H*	*7*	*2*	*4*	*0*	
	6	*lichen*						*0,5*	
							Σ	***10,5***	***32,81***
BO4	*1*	*Cynodon dactylon*	*TZ*	*G(H)*	*6k*	*3*	*0*	*4*	
	2	*Euphorbia cyparissias*	*GY*	*H(G)*	*5k*	*3*	*4*	*1,5*	
	3	*Festuca pseudovina*	*TZ*	*H*	*5k*	*2*	*0*	*3*	
	4	*Eryngium campestre*	*TZ*	*H*	*7*	*2*	*4*	*0*	
	5	*moss*						*0*	
	6	*lichen*						*0,2*	
							Σ	***8,7***	***27,19***
BO5	*1*	*Petrorhagia prolifera*	*K*	*Th*	*6a*	*1*	*0*	*0,2*	
	2	*Cynodon dactylon*	*TZ*	*G(H)*	*6k*	*3*	*0*	*4*	
	3	*Festuca pseudovina*	*TZ*	*H*	*5k*	*2*	*0*	*8*	
	4	*Potentilla incana*	*K*	*H*	*6a*	*1*	*5*	*0,2*	
	5	*Thymus odoratissimus*	*K*	*Ch*	*5*	*2*	*3*	*3*	
	6	*Crepis biennis*	*K*	*Th*	*5a*	*4*	*0*	*2*	
	7	*lichen*						*0,5*	
							Σ	***17,9***	***55,94***
BO6	*1*	*Petrorhagia prolifera*	*K*	*Th*	*6a*	*1*	*0*	*0*	
	2	*Conyza canadensis*	*GY*	*Th-TH*	*0*	*4*	*0*	*0,2*	
	3	*Cynodon dactylon*	*TZ*	*G(H)*	*6k*	*3*	*0*	*3*	
	4	*Festuca pseudovina*	*TZ*	*H*	*5k*	*2*	*0*	*2*	
	5	*Taraxacum officinale*	*GY*	*H*	*0*	*5*	*0*	*0*	
	6	*Trifolium arvense*	*GY*	*Th*	*5a*	*2*	*4*	*0*	
	7	*Potentilla incana*	*K*	*H*	*6a*	*1*	*5*	*0*	
	8	*Rumex acetosella*	*K*	*H(G)*	*5*	*2*	*2*	*0*	
	9	*Glechoma hederacea*	*K*	*H-(Ch)*	*5*	*4*	*4*	*0*	
	10	*Salvia nemorosa*	*K*	*H*	*6k*	*2*	*4*	*0*	
	11	*Eryngium campestre*	*TZ*	*H*	*7*	*2*	*4*	*0*	
	12	*Tragopogon dubius*	*TZ*	*TH*	*6k*	*4*	*0*	*0*	
	13	*Hypericum perforatum*	*TZ*	*H*	*5a*	*3*	*0*	*0*	
	14	*Crepis biennis*	*K*	*Th*	*5a*	*4*	*0*	*1*	
	15	*Silene otites*	*K*	*H*	*5k*	*2*	*4*	*0*	
	16	*Elymus repens*	*GY*	*G*	*5*	*3*	*0*	*0,5*	
	17	*Echium vulgare*	*TP*	*TH*	*6a*	*3*	*0*	*0*	
							Σ	***6,7***	***20,94***
BO7	*1*	*Conyza canadensis*	*GY*	*Th-TH*	*0*	*4*	*0*	*1,5*	
	2	*Cynodon dactylon*	*TZ*	*G(H)*	*6k*	*3*	*0*	*4*	
	3	*Euphorbia cyparissias*	*GY*	*H(G)*	*5k*	*3*	*4*	*0,5*	
	4	*Gypsophila muralis*	*TP*	*Th*	*5a*	*2*	*2*	*0*	
	5	*Festuca pseudovina*	*TZ*	*H*	*5k*	*2*	*0*	*4*	
	6	*Rumex acetosella*	*K*	*H(G)*	*5*	*2*	*2*	*0*	

	7	*Thymus odoratissimus*	*K*	*Ch*	*5*	*2*	*3*	*0,5*	
	8	*Salvia nemorosa*	*K*	*H*	*6k*	*2*	*4*	*0*	
	9	*Eryngium campestre*	*TZ*	*H*	*7*	*2*	*4*	*0*	
	10	*Hypericum perforatum*	*TZ*	*H*	*5a*	*3*	*0*	*0*	
	11	*Poa angustifolia*	*E*	*H*	*5*	*3*	*4*	*1*	
	12	*Crepis biennis*	*K*	*Th*	*5a*	*4*	*0*	*3*	
	13	*Diplotaxis tenuifolia*	*GY*	*H(Ch)*	*6a*	*3*	*4*	*0*	
	14	*Trifolium arvense*	*GY*	*Th*	*5a*	*2*	*4*	*0*	
	15	*lichen*						*0,5*	
							Σ	***15***	***46,88***
M1	1	*Cynodon dactylon*	*TZ*	*G(H)*	*6k*	*3*	*0*	*16*	
	2	*Trifolium ornithopodioides*	*TP*	*Th*	*5a*	*3*	*4*	*2*	
	3	*Taraxacum officinale*	*GY*	*H*	*0*	*5*	*0*	*0*	
	4	*Thymus odoratissimus*	*K*	*Ch*	*5*	*2*	*3*	*0,2*	
	5	*Achillea millefolium*	*TZ*	*H*	*5k*	*5*	*0*	*0,2*	
	6	*Ranunculus repens*	*TZ*	*H*	*5*	*8*	*0*	*0*	
	7	*Eryngium campestre*	*TZ*	*H*	*7*	*2*	*4*	*0,2*	
	8	*Stellaria graminea*	*TZ*	*H*	*5*	*4*	*3*	*2*	
	9	*Polygonum aviculare*	*GY*	*Th*	*0*	*4*	*3*	*1*	
	10	*Geranium molle*	*GY*	*Th*	*5*	*3*	*4*	*0*	
	11	*Bromus hordeaceus*	*TZ*	*Th*	*5*	*3*	*0*	*2*	
	12	*Lotus corniculatus*	*TZ*	*H*	*5a*	*4*	*0*	*0*	
	13	*Plantago maritima*	*K*	*H*	*5a*	*6*	*5*	*0*	
	14	*Brachypodium pinnatum*	*E*	*H(Ch)*	*5a*	*2*	*4*	*0*	
	15	*Viola tricolor subsp. tricolor*	*K*	*Th-H*	*5a*	*3*	*0*	*0*	
	16	*Trifolium pratense*	*TZ*	*H*	*5*	*6*	*3*	*2*	
							Σ	***25,6***	***80,00***
M2	1	*Lolium perenne*	*GY*	*H*	*5a*	*5*	*0*	*2*	
	2	*Cynodon dactylon*	*TZ*	*G(H)*	*6k*	*3*	*0*	*16*	
	3	*Potentilla argentea*	*TZ*	*H*	*5*	*2*	*3*	*0,5*	
	4	*Trifolium repens*	*TZ*	*H*	*5a*	*5*	*0*	*1*	
	5	*Taraxacum officinale*	*GY*	*H*	*0*	*5*	*0*	*0*	
	6	*Potentilla incana*	*K*	*H*	*6a*	*1*	*5*	*0,2*	
	7	*Achillea millefolium*	*TZ*	*H*	*5k*	*5*	*0*	*1*	
	8	*Eryngium campestre*	*TZ*	*H*	*7*	*2*	*4*	*0,2*	
	9	*Polygonum aviculare*	*GY*	*Th*	*0*	*4*	*3*	*2*	
	10	*Geranium molle*	*GY*	*Th*	*5*	*3*	*4*	*0*	
	11	*Bromus hordeaceus*	*TZ*	*Th*	*5*	*3*	*0*	*2*	
	12	*Achillea setacea*	*K*	*H*	*5*	*2*	*5*	*0,2*	
	13	*Phleum pratense*	*TZ*	*H*	*5*	*5*	*0*	*0,5*	
	14	*Festuca ovina*	*K*	*H*	*5a*	*4*	*2*	*1*	
	15	*Plantago maritima*	*K*	*H*	*5a*	*6*	*5*	*0*	
							Σ	***26,6***	***83,13***
M3	1	*Clinopodium vulgare*	*K*	*H*				*0*	
	2	*Fragaria viridis*	*K*	*H*	*5k*	*3*	*4*	*0,2*	
	3	*Gratiola officinalis*	*K*	*H*	*5a*	*8*	*4*	*0*	
	4	*Potentilla argentea*	*TZ*	*H*	*5*	*2*	*3*	*1*	
	5	*Linaria vulgaris*	*TZ*	*H(TH)*	*5a*	*3*	*3*	*0*	
	6	*Pimpinella saxifraga*	*TZ*	*H*	*5a*	*3*	*3*	*0,5*	
	7	*Thymus odoratissimus*	*K*	*Ch*	*5*	*2*	*3*	*4*	
	8	*Erodium cicutarium*	*GY*	*Th*	*0*	*4*	*0*	*0*	
	9	*Poa angustifolia*	*E*	*H*	*5*	*3*	*4*	*12*	
	10	*Achillea millefolium*	*TZ*	*H*	*5k*	*5*	*0*	*1,5*	
	11	*Puccinellia distans*	*K*	*H*	*5k*	*9*	*4*	*0,2*	
	12	*Plantago lanceolata*	*TZ (K)*	*H*	*5a*	*4*	*0*	*0,2*	
	13	*Carex humilis*	*E*	*H*	*5k*	*2*	*5*	*0,2*	
	14	*Gypsophila muralis*	*TP*	*Th*	*5a*	*2*	*2*	*0*	
	15	*Phleum pratense*	*TZ*	*H*	*5*	*5*	*0*	*1,5*	
	16	*Rumex acetosella*	*K*	*H(G)*	*5*	*2*	*2*	*0,2*	
	17	*Silene otites*	*K*	*H*	*5k*	*2*	*4*	*0,2*	
							Σ	***21,7***	***67,81***
M4	1	*Dactylis glomerata*	*TZ*	*H*	*5a*	*6*	*4*	*3*	
	2	*Potentilla argentea*	*TZ*	*H*	*5*	*2*	*3*	*0,5*	

	3	*Potentilla incana*	K	H	6a	1	5	0,5	
	4	*Poa angustifolia*	E	H	5	3	4	6	
	5	*Medicago lupulina*	GY	Th-TH	5	6	4	1	
	6	*Trifolium hybridum*	K	H	5a	8	4	1	
	7	*Achillea millefolium*	TZ	H	5k	5	0	0,5	
	8	*Centaurea jacea subsp. angustifolia*	TZ	H	5a	6	0	0	
	9	*Knautia arvensis*	K	H	5a	3	4	0	
	10	*Festuca arundinacea*	TZ	H	5a	8	0	4	
	11	*Stellaria graminea*	TZ	H	5	4	3	3	
	12	*Achillea setacea*	K	H	5	2	5	0,2	
	13	*Phleum pratense*	TZ	H	5	5	0	1,5	
	14	*Lotus corniculatus*	TZ	H	5a	4	0	0,2	
	15	*Juncus sp.*						1	
	16	*Galium verum*	K	H	5k	3	4	0	
	17	*Trifolium pratense*	TZ	H	5	6	3	1	
							Σ	**23,4**	**73,13**
M5	1	*Cynodon dactylon*	TZ	G(H)	6k	3	0	8	
	2	*Potentilla argentea*	TZ	H	5	2	3	0,2	
	3	*Euphorbia cyparissias*	GY	H(G)	5k	3	4	1	
	4	*Potentilla incana*	K	H	6a	1	5	0,5	
	5	*Poa angustifolia*	E	H	5	3	4	6	
	6	*Stellaria graminea*	TZ	H	5	4	3	3	
	7	*Achillea setacea*	K	H	5	2	5	0,2	
	8	*Lotus corniculatus*	TZ	H	5a	4	0	0,5	
	9	*Trifolium arvense*	GY	Th	5a	2	4	0,5	
							Σ	**19,9**	**62,19**
M6	1	*Cynodon dactylon*	TZ	G(H)	6k	3	0	8	
	2	*Festuca pseudovina*	TZ	H	5k	2	0	6	
	3	*Potentilla incana*	K	H	6a	1	5	0,2	
	4	*Thymus odoratissimus*	K	Ch	5	2	3	4	
	5	*Achillea millefolium*	TZ	H	5k	5	0	1	
	6	*Gypsophila muralis*	TP	Th	5a	2	2	0	
	7	*Eryngium campestre*	TZ	H	7	2	4	0	
	8	*Ranunculus polyanthemos*	TZ	H	5k	4	3	0	
	9	*Cerastium dubium*	TP	Th	6k	3	0	0,2	
	10	*Galium verum*	K	H	5k	3	4	0	
							Σ	**19,4**	**60,63**
M7	1	*Cynodon dactylon*	TZ	G(H)	6k	3	0	3	
	2	*Potentilla incana*	K	H	6a	1	5	0	
	3	*Rumex acetosella*	K	H(G)	5	2	2	0	
	4	*Thymus odoratissimus*	K	Ch	5	2	3	1	
	5	*Eryngium campestre*	TZ	H	7	2	4	0	
	6	*Poa angustifolia*	E	H	5	3	4	2	
							Σ	**6**	**18,75**
M8	1	*Conyza canadensis*	GY	Th-TH	0	4	0	0	
	2	*Cynodon dactylon*	TZ	G(H)	6k	3	0	4	
	3	*Euphorbia cyparissias*	GY	H(G)	5k	3	4	2	
	4	*Festuca pseudovina*	TZ	H	5k	2	0	3	
	5	*Polygonum arenarium*	TP	Th	6k	0	0	0,2	
	6	*Rumex acetosella*	K	H(G)	5	2	2	0	
	7	*Salvia nemorosa*	K	H	6k	2	4	0,2	
	8	*Eryngium campestre*	TZ	H	7	2	4	0	
	9	*Crepis biennis*	K	Th	5a	4	0	1,5	
	10	*lichen*						0,2	
							Σ	**11,1**	**34,69**
M9	1	*Robinia pseudoacacia*	GY	MM	5	3	4	0	
	2	*Petrorhagia prolifera*	K	Th	6a	1	0	0	
	3	*Conyza canadensis*	GY	Th-TH	0	4	0	0,2	
	4	*Cynodon dactylon*	TZ	G(H)	6k	3	0	8	
	5	*Euphorbia cyparissias*	GY	H(G)	5k	3	4	0,5	
	6	*Gypsophila muralis*	TP	Th	5a	2	2	0	
	7	*Pimpinella saxifraga*	TZ	H	5a	3	3	0	

	8	*Potentilla incana*	*K*	*H*	*6a*	*1*	*5*	*0,2*	
	9	*Rumex acetosella*	*K*	*H(G)*	*5*	*2*	*2*	*0,2*	
	10	*Thymus odoratissimus*	*K*	*Ch*	*5*	*2*	*3*	*3*	
	11	*Campanula rotundifolia*	*K*	*H*	*5*	*3*	*4*	*0*	
	12	*Eryngium campestre*	*TZ*	*H*	*7*	*2*	*4*	*0*	
	13	*Tragopogon dubius*	*TZ*	*TH*	*6k*	*4*	*0*	*0*	
	14	*Hypericum perforatum*	*TZ*	*H*	*5a*	*3*	*0*	*0*	
	15	*Festuca rupicola*	*E*	*H*	*6k*	*2*	*4*	*8*	
	16	*Diplotaxis tenuifolia*	*GY*	*H(Ch)*	*6a*	*3*	*4*	*0*	
	17	*Elymus repens*	*GY*	*G*	*5*	*3*	*0*	*4*	
							Σ	***24,1***	***75,31***
	1	*Conyza canadensis*	*GY*	*Th-TH*	*0*	*4*	*0*	*0*	
	2	*Cynodon dactylon*	*TZ*	*G(H)*	*6k*	*3*	*0*	*8*	
	3	*Gypsophila muralis*	*TP*	*Th*	*5a*	*2*	*2*	*0*	
	4	*Festuca pseudovina*	*TZ*	*H*	*5k*	*2*	*0*	*6*	
	5	*Pimpinella saxifraga*	*TZ*	*H*	*5a*	*3*	*3*	*0*	
	6	*Potentilla incana*	*K*	*H*	*6a*	*1*	*5*	*0,2*	
M10	7	*Thymus odoratissimus*	*K*	*Ch*	*5*	*2*	*3*	*3*	
	8	*Achillea millefolium*	*TZ*	*H*	*5k*	*5*	*0*	*0,2*	
	9	*Centaurea jacea subsp. angustifolia*	*TZ*	*H*	*5a*	*6*	*0*	*0*	
	10	*Eryngium campestre*	*TZ*	*H*	*7*	*2*	*4*	*0*	
	11	*Poa angustifolia*	*E*	*H*	*5*	*3*	*4*	*6*	
	12	*Ascelpias syriaca*	*GY*	*H*	*5*	*3*	*4*	*2*	
	13	*Plantago maritima*	*K*	*H*	*5a*	*6*	*5*	*1*	
							Σ	***26,4***	***82,50***
	1	*Conyza canadensis*	*GY*	*Th-TH*	*0*	*4*	*0*	*0,2*	
	2	*Cynodon dactylon*	*TZ*	*G(H)*	*6k*	*3*	*0*	*8*	
	3	*Gypsophila muralis*	*TP*	*Th*	*5a*	*2*	*2*	*0*	
	4	*Potentilla incana*	*K*	*H*	*6a*	*1*	*5*	*0,2*	
	5	*Thymus odoratissimus*	*K*	*Ch*	*5*	*2*	*3*	*4*	
M11	6	*Achillea millefolium*	*TZ*	*H*	*5k*	*5*	*0*	*1*	
	7	*Eryngium campestre*	*TZ*	*H*	*7*	*2*	*4*	*0*	
	8	*Ambrosia artemisiifolia*	*GY*	*Th*	*0*	*5*	*4*	*0,5*	
	9	*Plantago lanceolata*	*TZ (K)*	*H*	*5a*	*4*	*0*	*0,2*	
	10	*Crepis biennis*	*K*	*Th*	*5a*	*4*	*0*	*6*	
	11	*Galium verum*	*K*	*H*	*5k*	*3*	*4*	*0*	
							Σ	***20,1***	***62,81***
	1	*Achillea setacea*	*K*	*H*	*5*	*2*	*5*	*4*	
	2	*Petrorhagia prolifera*	*K*	*Th*	*6a*	*1*	*0*	*0*	
	3	*Potentilla argentea*	*TZ*	*H*	*5*	*2*	*3*	*0,2*	
	4	*Setaria pumila*	*GY*	*Th*	*0*	*2*	*0*	*2*	
	5	*Gypsophila muralis*	*TP*	*Th*	*5a*	*2*	*2*	*0*	
	6	*Festuca pseudovina*	*TZ*	*H*	*5k*	*2*	*0*	*4*	
	7	*Berteroa incana*	*GY*	*Th-H*	*6*	*3*	*4*	*0,2*	
M12	8	*Rumex acetosella*	*K*	*H(G)*	*5*	*2*	*2*	*0,2*	
	9	*Thymus odoratissimus*	*K*	*Ch*	*5*	*2*	*3*	*2*	
	10	*Salvia nemorosa*	*K*	*H*	*6k*	*2*	*4*	*0*	
	11	*Eryngium campestre*	*TZ*	*H*	*7*	*2*	*4*	*0*	
	12	*Ambrosia artemisiifolia*	*GY*	*Th*	*0*	*5*	*4*	*0*	
	13	*Poa angustifolia*	*E*	*H*	*5*	*3*	*4*	*4*	
	14	*Crepis biennis*	*K*	*Th*	*5a*	*4*	*0*	*3*	
	15	*Trifolium arvense*	*GY*	*Th*	*5a*	*2*	*4*	*1*	
							Σ	***20,6***	***64,38***
	1	*Cynodon dactylon*	*TZ*	*G(H)*	*6k*	*3*	*0*	*8*	
	2	*Trifolium repens*	*TZ*	*H*	*5a*	*5*	*0*	*0,5*	
	3	*Festuca pseudovina*	*TZ*	*H*	*5k*	*2*	*0*	*6*	
	4	*Juncus sp.*						*1,5*	
LM1	5	*Poa angustifolia*	*E*	*H*	*5*	*3*	*4*	*4*	
	6	*Achillea millefolium*	*TZ*	*H*	*5k*	*5*	*0*	*0,2*	
	7	*Plantago maritima*	*K*	*H*	*5a*	*6*	*5*	*0,2*	
	8	*Ononis spinosa*	*GY*	*H-Ch*	*5a*	*3*	*0*	*0*	
	9	*Carduus acanthoides*	*GY*	*TH*	*6a*	*3*	*0*	*0*	

							Σ	***20,4***	***63,75***
LM2	*1*	*Cynodon dactylon*	*TZ*	*G(H)*	*6k*	*3*	*0*	*8*	
	2	*Festuca pseudovina*	*TZ*	*H*	*5k*	*2*	*0*	*6*	
	3	*Potentilla incana*	*K*	*H*	*6a*	*1*	*5*	*0*	
	4	*Juncus sp.*						*1,5*	
	5	*Cleistogenes serotina*	*E*	*G*	*6*	*1*	*4*	*4*	
	6	*Medicago lupulina*	*GY*	*Th-TH*	*5*	*6*	*4*	*2*	
	7	*Achillea millefolium*	*TZ*	*H*	*5k*	*5*	*0*	*0,5*	
	8	*Poa pratensis*	*K*	*H*	*5*	*6*	*0*	*3*	
	9	*Plantago maritima*	*K*	*H*	*5a*	*6*	*5*	*0*	
							Σ	***25***	***78,13***
LM3	*1*	*Cynodon dactylon*	*TZ*	*G(H)*	*6k*	*3*	*0*	*16*	
	2	*Trifolium repens*	*TZ*	*H*	*5a*	*5*	*0*	*1,5*	
	3	*Potentilla incana*	*K*	*H*	*6a*	*1*	*5*	*0,5*	
	4	*Ajuga chamaepitys*	*GY*	*Th*	*5*	*3*	*4*	*0*	
	5	*Medicago lupulina*	*GY*	*Th-TH*	*5*	*6*	*4*	*2*	
	6	*Potentilla anserina*	*GY*	*H*	*5a*	*7*	*3*	*0,5*	
	7	*Plantago major*	*GY*	*H*	*5a*	*7*	*0*	*0,2*	
	8	*Lotus corniculatus*	*TZ*	*H*	*5a*	*4*	*0*	*0,5*	
	9	*Plantago maritima*	*K*	*H*	*5a*	*6*	*5*	*0,2*	
	10	*Ononis spinosa*	*GY*	*H-Ch*	*5a*	*3*	*0*	*0*	
	11	*Carduus acanthoides*	*GY*	*TH*	*6a*	*3*	*0*	*0*	
	12	*Teucrium scordium*	*K*	*H*	*5a*	*9*	*4*	*0*	
	13	*Mentha aquatica*	*K*	*HH*	*5a*	*9*	*0*	*0,5*	
	14	*Trifolium pratense*	*TZ*	*H*	*5*	*6*	*3*	*2*	
							Σ	***23,9***	***74,69***
LM4	*1*	*Cynodon dactylon*	*TZ*	*G(H)*	*6k*	*3*	*0*	*12*	
	2	*Festuca pseudovina*	*TZ*	*H*	*5k*	*2*	*0*	*6*	
	3	*Potentilla incana*	*K*	*H*	*6a*	*1*	*5*	*0,5*	
	4	*Thymus odoratissimus*	*K*	*Ch*	*5*	*2*	*3*	*2*	
	5	*Medicago lupulina*	*GY*	*Th-TH*	*5*	*6*	*4*	*0,5*	
	6	*Peucedanum carvifolia*	*K*	*H*	*5*	*2*	*3*	*0*	
	7	*Veronica prostrata*	*TZ*	*Ch*	*6k*	*2*	*4*	*0*	
	8	*Potentilla anserina*	*GY*	*H*	*5a*	*7*	*3*	*0,5*	
	9	*Achillea collina*	*TZ*	*H*	*5k*	*2*	*0*	*0,2*	
	10	*Gypsophila muralis*	*TP*	*Th*	*5a*	*2*	*2*	*0*	
	11	*Eryngium campestre*	*TZ*	*H*	*7*	*2*	*4*	*0*	
	12	*Cerastium dubium*	*TP*	*Th*	*6k*	*3*	*0*	*0,2*	
	13	*Plantago maritima*	*K*	*H*	*5a*	*6*	*5*	*0,2*	
	14	*Ononis spinosa*	*GY*	*H-Ch*	*5a*	*3*	*0*	*0*	
							Σ	***22,1***	***69,06***
LM5	*1*	*Cynodon dactylon*	*TZ*	*G(H)*	*6k*	*3*	*0*	*12*	
	2	*Potentilla incana*	*K*	*H*	*6a*	*1*	*5*	*0,5*	
	3	*Thymus odoratissimus*	*K*	*Ch*	*5*	*2*	*3*	*2*	
	4	*Poa angustifolia*	*E*	*H*	*5*	*3*	*4*	*4*	
	5	*Medicago lupulina*	*GY*	*Th-TH*	*5*	*6*	*4*	*1*	
	6	*Eryngium campestre*	*TZ*	*H*	*7*	*2*	*4*	*0*	
	7	*Achillea asplenifolia*	*K*	*H*	*5k*	*7*	*4*	*0,2*	
	8	*Plantago maritima*	*K*	*H*	*5a*	*6*	*5*	*0,2*	
							Σ	***19,9***	***62,19***
LM6	*1*	*Cynodon dactylon*	*TZ*	*G(H)*	*6k*	*3*	*0*	*2*	
	2	*Euphorbia cyparissias*	*GY*	*H(G)*	*5k*	*3*	*4*	*0*	
	3	*Potentilla incana*	*K*	*H*	*6a*	*1*	*5*	*0,2*	
	4	*Gypsophila muralis*	*TP*	*Th*	*5a*	*2*	*2*	*0*	
	5	*Rorippa austriaca*	*GY*	*HH*	*6k*	*8*	*4*	*0*	
	6	*Digitaria sanguinalis*	*GY*	*Th*	*0*	*2*	*4*	*0,5*	
	7	*Alopecurus pratensis*	*E*	*H*	*5*	*8*	*0*	*0,5*	
	8	*Poa pratensis*	*K*	*H*	*5*	*6*	*0*	*1*	
	9	*Phleum pratense*	*TZ*	*H*	*5*	*5*	*0*	*0,2*	
	10	*Cerastium dubium*	*TP*	*Th*	*6k*	*3*	*0*	*0,2*	
	11	*Plantago maritima*	*K*	*H*	*5a*	*6*	*5*	*0*	
							Σ	***4,6***	***14,38***

LM7	*1*	*Achillea setacea*	*K*	*H*	*5*	*2*	*5*	*0,5*	
	2	*Lotus maritimus*	*K*	*H*	*5a*	*6*	*4*	*3*	
	3	*Potentilla incana*	*K*	*H*	*6a*	*1*	*5*	*1,5*	
	4	*Juncus sp.*						*4*	
	5	*Centaurea jacea subsp. Angustifolia*	*TZ*	*H*	*5a*	*6*	*0*	*0*	
	6	*Plantago lanceolata*	*TZ (K)*	*H*	*5a*	*4*	*0*	*1*	
	7	*Poa angustifolia*	*E*	*H*	*5*	*3*	*4*	*12*	
	8	*Lotus corniculatus*	*TZ*	*H*	*5a*	*4*	*0*	*1,5*	
	9	*Puccinellia limosa*	*K*	*H*	*5*	*10*	*4*	*2*	
	10	*Galium verum*	*K*	*H*	*5k*	*3*	*4*	*0,2*	
	11	*Daucus carota*	*TZ*	*Th-TH*	*5a*	*2*	*5*	*2*	
	12	*Ranunculus pedatus*	*K*	*HG*	*5k*	*2*	*4*	*0,5*	
	13	*Mentha aquatica*	*K*	*HH*	*5a*	*9*	*0*	*2*	
							Σ	***30,2***	***94,38***
LM8	*1*	*Achillea millefolium*	*TZ*	*H*	*5k*	*5*	*0*	*0,5*	
	2	*Achillea setacea*	*K*	*H*	*5*	*2*	*5*	*0,5*	
	3	*Dactylis glomerata*	*TZ*	*H*	*5a*	*6*	*4*	*4*	
	4	*Potentilla incana*	*K*	*H*	*6a*	*1*	*5*	*2*	
	5	*Juncus sp.*						*4*	
	6	*Centaurea jacea subsp. Angustifolia*	*TZ*	*H*	*5a*	*6*	*0*	*0*	
	7	*Gypsophila muralis*	*TP*	*Th*	*5a*	*2*	*2*	*0*	
	8	*Galeopsis ladanum*	*G*	*Th*	*5*	*4*	*5*	*0,5*	
	9	*Plantago lanceolata*	*TZ (K)*	*H*	*5a*	*4*	*0*	*0,5*	
	10	*Poa angustifolia*	*E*	*H*	*5*	*3*	*4*	*8*	
	11	*Lotus corniculatus*	*TZ*	*H*	*5a*	*4*	*0*	*1,5*	
	12	*Puccinellia limosa*	*K*	*H*	*5k*	*3*	*4*	*2*	
	13	*Daucus carota*	*TZ*	*Th-TH*	*5a*	*2*	*5*	*2*	
	14	*Ranunculus pedatus*	*K*	*HG*	*5k*	*2*	*4*	*0,2*	
							Σ	***25,7***	***80,31***
LM9	*1*	*Achillea setacea*	*K*	*H*	*5*	*2*	*5*	*0,5*	
	2	*Cynodon dactylon*	*TZ*	*G(H)*	*6k*	*3*	*0*	*12*	
	3	*Pimpinella saxifraga*	*TZ*	*H*	*5a*	*3*	*3*	*0,2*	
	4	*Senecio erucifolius subsp. tenuifolius*	*TZ*	*H*	*5*	*5*	*3*	*0,5*	
	5	*Mentha longifolia*	*K*	*H(G)*	*5a*	*9*	*4*	*1*	
	6	*Centaurea jacea subsp. angustifolia*	*TZ*	*H*	*5a*	*6*	*0*	*0*	
	7	*Ononis spinosa*	*GY*	*H-Ch*	*5a*	*3*	*0*	*0*	
	8	*Plantago lanceolata*	*TZ (K)*	*H*	*5a*	*4*	*0*	*0,5*	
	9	*Poa angustifolia*	*E*	*H*	*5*	*3*	*4*	*12*	
	10	*Galium verum*	*K*	*H*	*5k*	*3*	*4*	*0*	
							Σ	***26,7***	***83,44***
LM10	*1*	*Lotus maritimus*						*2*	
	2	*Cynodon dactylon*	*TZ*	*G(H)*	*6k*	*3*	*0*	*12*	
	3	*Centaurea jacea subsp. angustifolia*	*TZ*	*H*	*5a*	*6*	*0*	*0*	
	4	*Cichorium intybus*	*GY*	*H(Th)*	*7*	*5*	*4*	*0*	
	5	*Ononis spinosa*	*GY*	*H-Ch*	*5a*	*3*	*0*	*0*	
	6	*Galeopsis ladanum*	*G*	*Th*	*5*	*4*	*5*	*2*	
	7	*Plantago lanceolata*	*TZ (K)*	*H*	*5a*	*4*	*0*	*0,5*	
	8	*Poa angustifolia*	*E*	*H*	*5*	*3*	*4*	*8*	
	9	*Galium verum*	*K*	*H*	*5k*	*3*	*4*	*0*	
	10	*Carduus acanthoides*	*GY*	*TH*	*6a*	*3*	*0*	*0*	
	11	*Daucus carota*	*TZ*	*Th-TH*	*5a*	*2*	*5*	*1,5*	
							Σ	***26***	***81,25***

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