PRODUCTIVITY OF PRATO-ECOSYSTEMS USED FOR GRAZING

PRODUCTIVITATEA PRATOECOSISTEMELOR VALORIFICATE PRIN PĂŞUNAT

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Abstract: *Pasture utilization for grazing represents one of the possibilities of using such areas efficiently, aiming especially at animal production. This paper work represents a study carried out during a few years upon the yield achieved in two pasture types, located in Ciacova, district of Timiş.*

Rezumat: *Valorificarea pajiştilor prin păşunat constituie una din posibilităţile de folosire eficientă a acestor categorii de teren, având ca scop principal producţia animală. Lucrarea de faţă reprezintă un studiu pe mai mulţi ani asupra producţiei a două tipuri de pajişti situate în localitatea Ciacova, jud. Timiş.*

Key words**:** *yield, prato-ecosystem, grazing*
Cuvinte cheie: *producţie, pratoecosistem, păşunat*

INTRODUCTION

Prato-ecosystems, like any other agro-ecosystems, assure the circuit of the nutritive elements between the compartments soil – plant – animal, under the influence of the climatic conditions and of the anthropic factor.

The researches undertaken in the field of pasture utilization for grazing have contributed to the elaboration of some rules concerning pasture organization and utilization, yield lagging and animal-based production enhancement.

MATERIAL AND METHOD

The experiments have been carried out in Ciacova. This area is located in the plain Timis – Bega, 35 km far from Timisoara.

The geographical coordinates of Ciacova are: 45°30´30´´ Northern latitude and 27°7´30´´ Eastern longitude compared to Greenwich.

The biological material studied is represented by the vegetation of types of pastures, edified by the associations *Trifolio repenti – Lolietum* and *Artemisio – Festucetum pseudovinae* located nearby Ciacova.

In order to determine pasture yields, we have used the method of the repeated mowing.

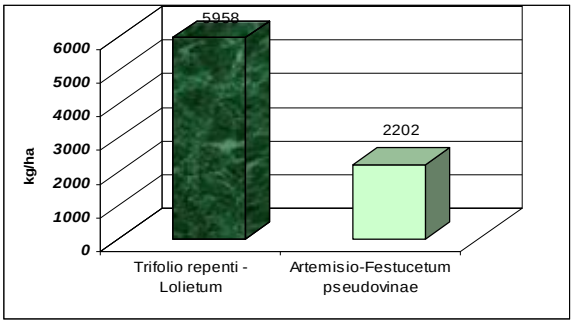
RESULTS AND DISCUSSIONS

The most important thing in pasture assessment is represented by its yield capacity, so that animal feed should be assured along the whole grazing period.

The analysis upon the green mass yield was carried out for the two types of pastures edified by the association *Trifolio repenti – Lolietum* and *Artemisio – Festucetum pseudovinae* during the four years of study and also during the four grazing cycles lasting for 150 days.

Analyzing the green mass yield achieved from the two types of pastures taken into study, we may notice that the yield is very significantly low in the pasture edified by the

association *Artemisio – Festucetum pseudovinae* (2202 kg/ha), compared to the yield achieved in the association *Trifolio repenti – Lolietum* (Fig. 1).

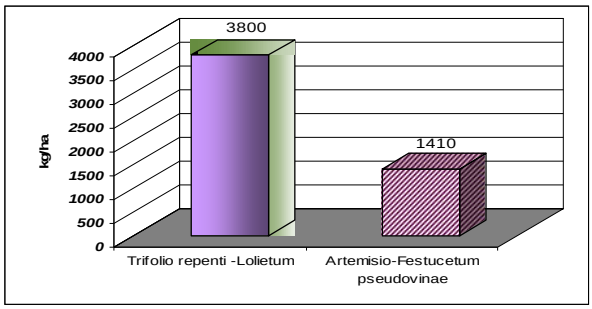


Variant	***Trifolio repenti – Lolietum***	***Artemisio – Festucetum pseudovinae***
Average yield (kg/ha)	5958	2202
Relative yield (%)	100	36,95
Difference (kg/ha)	Mt	-3756
Significance	-	000

Dl. 5% = 219 kg/ha Dl. 1%= 505 kg/ha Dl.0.1 % = 1609 kg/ha

Figure 1. Green mass yield (cycle I)

Comparing the green mass yield achieved in the second cycle of grazing, in the two types studied, we may notice that it is very significantly low in the pasture edified by the association *Artemisio – Festucetum pseudovinae* (1410 kg/ha) compared to the one achieved in the pasture dominated by the association *Trifolio repenti – Lolietum* (Fig. 2).

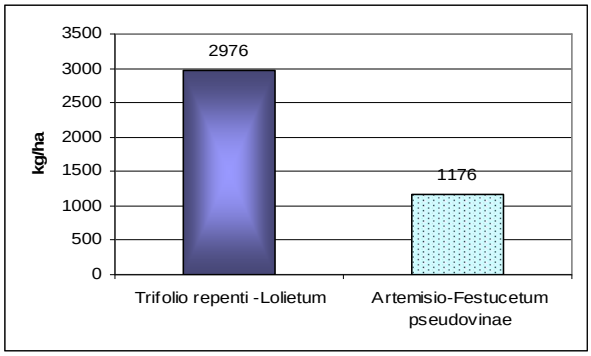


Variant	***Trifolio repenti – Lolietum***	***Artemisio – Festucetum pseudovinae***
Average yield (kg/ha)	3800	1410
Relative yield (%)	100	37,10
Difference (kg/ha)	Mt	-2390
Significance	-	000

Dl. 5% = 139 kg/ha Dl. 1%= 321 kg/ha Dl.0.1 % = 1024 kg/ha

Figure 2. Green mass yield (cycle II)

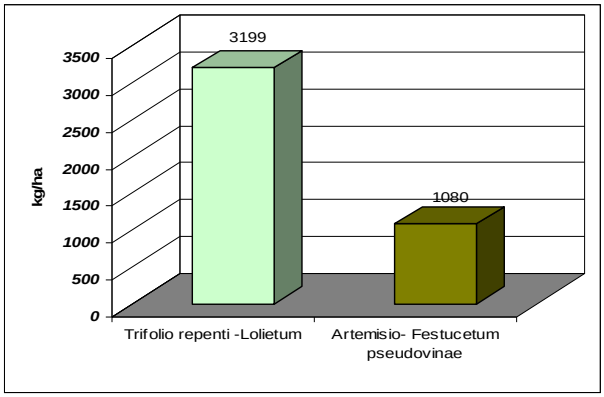
Comparing the green mass achieved in the third cycle in the pasture *Artemisio – Festucetum pseudovinae* with the one achieved in the control variant (*Trifolio repenti – Lolietum*), we may notice that it has a very significantly lower yield which represents only 39.51% (1176 kg/ha) of the control variant yield (Fig. 3).



Variant	***Trifolio repenti – Lolietum***	***Artemisio – Festucetum pseudovinae***
Average yield (kg/ha)	2976	1176
Relative yield (%)	100	39,51
Difference (kg/ha)	Mt	-1800
Significance	-	000

Dl. 5% = 184 kg/ha Dl. 1%= 425 kg/ha Dl.0.1 % = 1354 kg/ha

Figure 3. Green mass yield (cycle III)



Variant	***Trifolio repenti – Lolietum***	***Artemisio – Festucetum pseudovinae***
Average yield (kg/ha)	3199	1080
Relative yield (%)	100	33,76
Difference (kg/ha)	Mt	-2119
Significance		00

Dl. 5% = 353g/ha Dl. 1%= 817 kg/ha Dl.0.1% = 2599 kg/ha

Figure 4. Green mass yield (cycle IV)

The comparison between the green mass yield achieved in the pasture edified by the association *Artemisio – Festucetum pseudovinae* and in the control variant (*Trifolio repenti – Lolietum*), we may observe that the first one has a distinctly significant lower yield than the second one, representing 33.76% (1080 kg/ha) of the control variant yield (Fig. 4).

CONCLUSIONS

The biggest yield achieved in the pasture edified by the association *Trifolio repenti – Lolietum* may be explained through its floristic composition, through its gramineae and leguminous species which contribute to the increase of pasture quantity and quality.

In the case of both types of pastures, we may observe that the biggest green mass yield is achieved during the first grazing cycle.

During the researches carried out on the pastures edified by the associations *Trifolio repenti – Lolietum* and *Artemisio – Festucetum pseudovinae*, we have observed that grass yields range from one cycle to another, decreasing during the third and fourth grazing cycle, due to the drought available in that period.

LITERATURE

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