

EVALUATION OF THE PRODUCTIVITY OF PERMANENT GRASSLANDS FROM LĂZĂRENILOR HILLS, BIHOR COUNTY, ROMANIA

Teodor MARUȘCA¹, Laviniu I.N. BURESCU²

Abstract. *The hilly grasslands from western Romania, located between the Apuseni Mountains and the Pannonian Plain, were less studied in terms of productivity, respectively pastoral value and green forage mass production. In this paper, the productivity of the grasslands was evaluated based on floristic surveys - performed between the years 2008 and 2011 in Lăzărenilor Hills area. The grasslands are located at altitudes ranging from 150 to 410 m, on flat land up to slopes of 30 degrees. The average vegetation cover is 87% with limits between 82-90%, comprising on average 54 cormophytes, the smallest number of species – 25, found in Caricetum brizoides and the largest comprising 115 species in Anthoxantho - Agrostietum capillaris. The highest pastoral value was 78.9 in Festucetum pratensis and below 5 in Caricetum brizoides, Caricetum hirtae, Juncetum effusi and Ventenato - Xeranthemetum cylindraceum, considered degraded in terms of forage quality and green mass production. The highest yield of 16-19 t/ha green mass was evaluated in Festucetum pratensis and Lolio - Plantagnetum repenti, which recorded an optimal loading with animals around 1.5 LU/ha in a season of 175 days of grazing. At the level of phytosociological alliances, the lowest productivity and grazing capacity were evaluated for Deschampsion caespitosae and Thero-Airion, with only 0.03-0.05 LU/ha. The data regarding the productivity of the grasslands are useful first of all for the elaboration of the pastoral arrangements and the proper management of the grasslands.*

Keywords: hilly grasslands, green mass production, pastoral value, loading with animals

2. Introduction

The evaluation of grasslands productivity is equally important as the knowledge of the vegetation in terms of the floristic composition of the grassy carpet [4, 10, and 17].

Until recently, the grass production of grasslands has been determined by mowing and weighing in protected areas, from where samples have been taken for quality chemical analyzes. As this classic method is more difficult to apply in the territory, a new method based on floristic survey has been developed to assess the productivity of grasslands [5].

¹Assoc. Prof., Ph.D., Eng., Senior Researcher, Research-Development Institute for Grasslands Brasov, Romania, Corresponding Member of the Academy of the Romanian Scientists (e-mail: maruscat@yahoo.com).

²Lecturer, PhD, Eng., University of Oradea, Department of Forestry and Forest Engineering, Oradea, Bihor County, Romania (e-mail: laviniuburescu@gmail.com).