

## **Mediterranean-Mountain Grasslands (Ćićarija, Croatia): the Nutritive Value of Functional Groups**

**Ivana VITASOVIĆ KOSIĆ, Darko GRBEŠA, Mihaela BRITVEC**

Faculty of Agriculture, University of Zagreb, Svetošimunska 25, 10000 Zagreb, Croatia Department of Agricultural Botany, <sup>2</sup>Department of Animal Nutrition  
(ivitasovic@agr.hr )

The aim of this study was to research the chemical composition, *in-vitro* digestibility of the organic matter (IVOMD) and net energy for lactation (NEL) contained in the samples of botanical functional groups, located in the Mediterranean-mountain grasslands on the Ćićarija mountainous plateau in Croatia.

During research conducted 2008, terrain and laboratory measurements on the 60 grasslands samples (1x1m) were obtained the following results: the ratio of functional groups is 6:3:1, the most common are the grass and grass-like (57.60%), followed by forbs (35.01%) and legumes (7.39%). Through growing season on the *Scorzonero-Chrysopogonetalia* grasslands, the average mass fraction of the group grass and grass-like increased ( $P < 0.05$ ), forbs decreased ( $P < 0.05$ ) and legumes remained unchanged. Among the functional groups legumes had the highest, forbs have a moderate, and grass and grass-like have the lowest value ( $P < 0.05$ ) of crude protein (167 vs. 99 vs. 88 g/kg DM), digestibility of organic matter (72 vs. 67 vs. 58 %) and NEL (6.50 vs. 5.96 vs. 4.95 MJ/kg DM). Forbs have the highest content of ash (72 g/kg DM) and lignin (97 g/kg DM). The expected highest content of neutral detergent fiber (NDF: 735 g/kg DM) and acid detergent fiber (ADF: 387 g/kg DM) was found in the group of grass and grass-like samples. This study provides nutritional information of functional groups of the Mediterranean-mountain grasslands which can improve the ecological herbivore production as well as preserve grassland habitats and biodiversity on Ćićarija SPA of Natura 2000 in Croatia.

**Keywords:** feed value, functional groups, *Scorzonero-Chrysopogonetalia*, Mediterranean-mountain grasslands, Croatia.

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