Mediterranean-Mountain Grasslands (Čićarija, Croatia): the Nutritive Value of Functional Groups

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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 Čićarija 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 Čićarija SPA of Natura 2000 in Croatia.

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

REFERENCES