FERTILIZATIONS’ INFLUENCE UPON THE NUTRITIVE AND ENERGETIC VALUE OF THE FODDER OBTAINED ON A FESTUCA VALESIACA SCHLEICH. – BRACHYPODIUM PINNATUM (L.) BEAUV. MEADOW

Chelariu Elena-Liliana¹, B. V. Avarvarei¹, Nicoleta-Luminiţa Paraschiv², Mariana Volf², Tatiana Sandu¹

¹University of Agricultural Sciences and Veterinary Medicine, Faculty of Horticulture Iaşi, 3 Mihail Sadoveanu Alley, 700490 Iaşi, Romania, email: liliana.ch2001@yahoo.co.uk
²Faculty of Agriculture Iaşi.

Key words: nutritive value, energetic value, fodder, fertilization.

SUMMARY

To make the calculation of the fodders’ nutritive value was established multiple regression equations in which the independent variables are connected with their content in raw protein, raw cellulose and ash. For hay was calculated after Demarquilly C., (1981) system, the equations that presents the nutritive value of the fodders expressed in milk nutritive units (UNL), meat nutritive units (UNC) and digestible raw protein (PDIN and PDIE) on a kg of dry matter. The net energy (EN) of the fodders represents the quantity of energy totally used by animals to maintain the vital functions and for synthesis of different husbandry products. The fodders’ nutritive value expressed in UNL and UNC increased at the same time with the increasing of the mineral and organic fertilizers doses.

In 2004, on a Festuca valesiaca Schleich. – Brachypodium pinnatum (L.) Beauv.meadows from Slănic – Buzău area, at control variant were obtained 0.79 UNL/kg DM and 0.74 UNC/kg DM, and at N₆₄ fertilization these values increased to 0.81 respectively 0.76, and at N₁₂₈P₇₂ variant the values were 0.84 UNL/kg DM and 0.80 UNC/kg DM. The quantity of digestible protein at one kilo of DM at control variant was of 71 g in the case of digestible protein based on the energy from the quota (PDIE) and 52 g in the case of digestible protein based on the nitrogen from quota (PDIN). At fertilization with nitrogen fertilizers or on a phosphorous agri-fund, protein increased together with the doses increasing from 75 g PDIE and 50 g PDIN at N₆₄ variant, to 81 g PDIE and 70 g PDIN at N₁₂₈P₇₂ variant. Regarding the energetic value it was observed that both milk net energy (ENL) and meat net energy (ENC) recorded increases function of kind and dose of the administrated fertilizers.

The number of UNL and UNC recorded at a hectare of permanent meadow was function of the fertilization level. The level of fertilization also, influenced the milk quantities and the weight increases. To calculate the milk quantities, respectively weight increase, it was taken in consideration that for one litre of milk with 4 % fat there are necessary 0.7 UNL, and for a kg weight increase, around 8 UNC.

At control variant could be obtained 2517 l milk and 206 kg weight increase, and at N₆₄ variant cu the quantities increased to 3344 l milk and 275 kg weight increase. At fertilization with N₁₂₈P₇₂ could be obtained 4609 l milk and 384 kg weight increase, and at the variant with 7 t/ha vinassa + P₁₀₈ the obtained milk quantity, increases at 5234 l, and the weight increase to 437 kg.

REFERENCES

462