

STUDIES REGARDING THE PRODUCTIVITY OF GRASSLANDS FROM AGROSILVOPASTORAL SYSTEM FROM GRECI VILLAGE, TULCEA COUNTY, ROMANIA

Teodor MARUȘCA¹, Daniyar MEMEDEMİN², Elena TAULESCU³,
Bogdan BĂJENARU⁴, Viorel ROȘCA⁵, Andreea C. ANDREOIU⁶

Abstract. *The most extensive agrosilvopastoral systems (ASPs) in Romania are found in Dobrogea where the climate is warmer, with less rainfall. Determination of agrochemical properties of the soil on the grasslands with trees revealed an increase of 40-100% of the fertilizing elements (N, P, K) compared to treeless grasslands. The participation of fodder species in the vegetal layer under trees is twice as high, the pastoral value more than 3 times and the fodder production more than 6 times higher than in the treeless grassland. Analyzes on feed quality showed an increase from 12 to 20% of crude protein and feed digestibility, from 38% in the open field to 65% under trees. Also, the optimal stocking rate for a 185-day grazing season is almost 1 Livestock Unit (LU) / ha under trees and 6 times lower on the treeless grassland. The results confirm the desirability of maintaining and expanding ASPs, in full accordance with global climate change approaches.*

Keywords: agrosilvopastoral system, floristic composition, permanent grassland productivity, feed quality

1. Introduction

The agro-forestry system for raising livestock, especially cattle, on meadows with rare trees, has been called "agrosilvopastoral system" (ASPs) or "silvopastoral system" or "agroforestry". The system is implemented mainly on poor quality or non-agricultural land and aims at extensive animal husbandry [5, 2, 16].

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

²Lecturer, Ph.D., Eng., "Ovidius" University of Constanta, Faculty of Natural and Agricultural Sciences, Romania (e-mail: daniyar_memedemin@yahoo.com)

³Researcher, MSc., Eng., Research and Development Institute for Grasslands Brasov, Romania (e-mail: taulescuelena@yahoo.com)

⁴Biol., Macinului Mountains National Park, Romania (e-mail: bogdan_bajenaru@yahoo.com)

⁵Director, Ph.D., Eng., Macinului Mountains National Park, Romania (e-mail: director.apnmm@gmail.com)

⁶Chemist, Ph.D. Stud., Research and Development Institute for Grasslands Brasov, Romania (e-mail: andreea.andreoiu@pajisti-grassland.ro)