

MULTIFUNCTIONAL STRUCTURE OF PERMANENT PASTURES IN ROMANIA

STRUCTURA MULTIFUNCTIONALA A PAJISTILOR PERMANENTE DIN ROMANIA

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At the moment, the area of permanent pastures in Romania is about 4.9 million hectares, representing 21% of the total country area and 33% of the agricultural land. Compared to the year 1988, the permanent pasture area increased in 2006 with 12%, and in 2013 it will be 7 million hectares. The pasture area per capita is 0.57ha, at world level, compared to only 0.22 ha in our country. The functional pasture structure in Romania is deeply disordered by natural factors and especially by the lack of interest for its amelioration.

Key words: permanent pastures, area evolution, multifunctionality

Introduction

Among all agricultural structures, pastures represent real “cover crops” long-term systems, covering the soil with characteristic vegetation all along the agricultural year and contributing directly to the improvement of soil fertility, to the reduction of soil erosion’s negative effects, to the diversification of animal food and to the permanent regulation of natural factors. The multifunctionality of these lands is provided by the vegetal cover, consisted of many species with importance for animal food and that maintain the ecologic balance in various relief forms (authors – bibliography).

This work comprises a synthesis of the current and perspective situation of the permanent pasture surfaces in our country, by making their multifunctional character evident.

Materials and Methods

The studies performed rely on the presentation of the evolution of permanent pasture surfaces and of animal livestock in Romania, during 1988-2006.

To analyze the data achieved, we made evident the following parameters: percentage of pastures within the agricultural structure, pasture surface per capita, the position of our country compared to the E.U. countries and the particularities of the multifunctional system of permanent pastures.

Results and Discussions

Permanent pastures are a part of the rural area, together with all the other specific social-economic activities. Romanian rural area's dimension comprises more than 90% of the country's surface, compared to only 75% in the E.U. From this viewpoint, we may consider that it is not possible to have durable agricultural development outside the rural area, as we cannot imagine an environmental durable development without a durable agriculture, especially for our country considered as one of the most rural countries in Europe. The transition to the durable development system can be made if we have an optimal financial, economic, technological and human standard, and under the conditions provided by the balanced utilization, protection and preservation of natural resources and ecosystems.

Table 1

Comparative situation of permanent pasture surfaces

Year	Hectares (thousand ha)	%	ha pastures/ capita	Compared to EU		
				% of total pasture surface	ha/capita	Position
1988	4401.1	100	0.19	-	0.17	-
1992	4829.8	110	0.21	-	0.16	-
1993	4851.8	110	0.21	-	0.15	-
2006	4937.5	112	0.22	6.5	0.15	4
2013	≈7000.0	159	0.31	9.4	0.13	3

During the last two decades, the surface of permanent pastures in our country has increased with 10-12%, attaining, at the beginning of 2007, the surface of 4.9 million hectares. The increase of these areas took place because of the arable land that was not cultivated (abandoned), which represented the former communal pastures. If we compare the Romanian pasture area to the E.U. mean, we may observe that from this viewpoint we have a good position: position 4 as surface, 0.22 ha/capita compared to only 0.15 ha in the E.U., with a percentage of 6.5% of the total E.U. pastures.

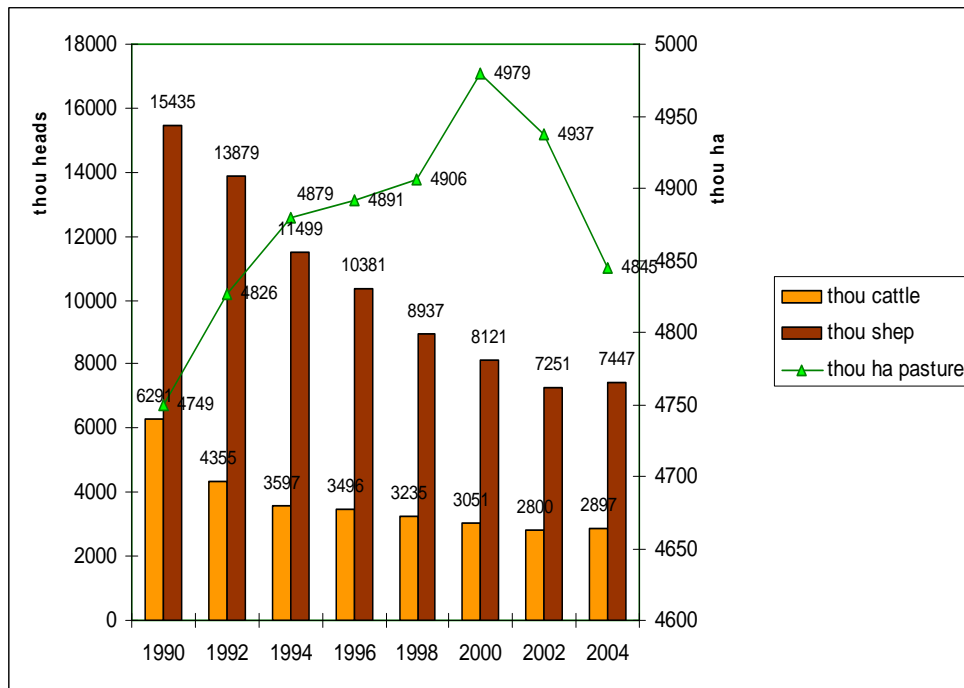


Figure 1. Evolution of permanent pasture surfaces and of livestock

The statistical data presented in Fig. 1 lead to the conclusion that, during the last 15 years (1990-2004), a dramatic livestock decrease has occurred (46% in cattle and 48% in sheep), meanwhile the permanent pasture area has increased with 10-12%. This situation has had drastic consequences on vegetation and on the utilization of these areas. So, on most pastures, especially in hill and mountain regions, we may observe a dramatic decrease of the utilization degree, respectively a smaller animal load on pastures, with negative effects upon vegetation biodiversity. This situation has influenced strongly the functional structure of pastures in Romania, especially with the aggressiveness of some plant species (bracken fern, bulrush, semi shrubs), which replaced the important species on 30% of the surface.

The multifunctionality of permanent pastures in Romania is provided by the complexity of utilization of this land patrimony, like: food source for animals, performance of connected economic activities, life habitat for animals, great diversity of plant species and a genetic germplasm fund, important factor for soil protection (at the most difficult altitudes), landscape and energetic importance.

Table 2

Multifunctional structure of permanent pastures in Romania

Main functions	Functions' characteristics
Feed for animals	It provides the necessary forage for at least 60% of the cattle livestock and 80% of the sheep livestock
Economic aspects	Connected activities resulted from the utilization and capitalization of pastures (animal-product processing, gathering of herbs, apiculture, etc.)
Habitat for animals	Among the 783 types of habitats met in Romania, almost 60% may be met in permanent pastures. Among the animal species, 5 have disappeared, and more than 30 are threatened by disappearance
Biodiversity and preservation of plant species	On the territory of our country, more than 3700 species of plants were identified, of which more than 70% belong to the permanent pasture vegetation. 74 species of them have disappeared, 485 are threatened by disappearance, 200 species are vulnerable, 23 are declared monuments of nature and 1253 are rare species. The biodiversity indices of pasture vegetation in Romania are higher than in many European countries. Romanian pastures comprise an important genetic fund of germplasm and a very rich melliferous and medicinal flora.
Ecologic function	Soil protection against erosion and preservation of natural area.
Landscape function	Plant diversity ennobles and beautifies the environment.
Energetic function	A big biomass part could be transformed into unconventional energetic products.

Conclusions

The area of Romanian permanent pastures has increased, during the last two decades, with 10-12%, due to some agricultural lands that were not cultivated;

Compared to the E.U. mean, permanent pastures in our country represent 6.5% of the total land area and occupies the 4th position, and the pasture surface per capita is 0.22 ha, compared to only 0.15 ha in the E.U.;

The multifunctionality of permanent pastures provides the balance of the entire natural ecosystem and also the social-economic development of the rural area.

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