

The Biodiversity of Sheep Breeds in Romania and Bioeconomic Impact on Agriculture



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INTRODUCTION

Sheep, due to their number, superior productive potential and relatively low investment, maintenance and marketing costs of products, represent an economic opportunity. Sheep breeding still makes an essential contribution today, by supporting thousands of producers, by providing livestock products necessary for human consumption (milk, cheese, meat), as well as derived products, thus having an essential socio-economic contribution in rural areas

METHODOLOGY

This paper analyses the components of sheep biodiversity in Romania, the role of local breeds, the economic and ecological impact, and also offers recommendations for valorisation and conservation .

RESULTS AND DISCUSSION

Romania has a rich heritage of sheep breeds, with local varieties adapted to mountain, sub-mountain and plain conditions. The native breeds are: Tisigai, Turcana, Merino, Karakul, Racka, Black head of Teleorman. These breeds are ecologically adapted and have multiple roles. Biodiversity loss is due to: poor management of breeding activity (uncontrolled crossing and abandonment), numerical decline of certain populations and climate change; decreased profitability of wool due to loss of markets and processing infrastructure; aging of breeders, rural migration and loss of knowledge related to transhumance; lack of payment schemes focused on ecosystem services and the maintenance of native breeds. Ecosystem services: Extensive grazing with adapted breeds maintains pastoral landscapes and floristic biodiversity, contributes to preventing vegetation overcrowding and maintaining rural routes. Sheep make very good use of marginal lands and poor pastures, unsuitable for other animal species in the livestock sector. Economic risks: The loss of local varieties reduces resilience to emerging diseases and climate change; Massive replacement with specialized imported breeds increases production costs and dependence on technology; Products with cultural value and traditional certifications may disappear with imported breeds, reducing export opportunities. Technical-scientific, economic-social and legislative-administrative measures: Development of a coherent legislative framework, correlated with that of the EU, which would allow all agricultural producers in Romania to be interested in obtaining agri-food products. In situ and ex situ conservation, financial support for breeders of traditional breeds, conservation centers, gene banks. Breeding programs specific to local breeds Subsidies for breeds in danger of extinction Expansion of pedigree registers and genetic monitoring. Promotion of consumption of products from local breeds, labeling, pastoral tourism, educational farms. Rewarding farmers for moderate grazing. Promoting sustainable development of agriculture, respecting the principles of harmonizing agricultural practices with environmental protection requirements and the use, in particular, of renewable natural resources. Detection, regulation and reduction of activities with effects of environmental degradation or pollution. Financial support for livestock farms to introduce the latest animal husbandry technologies and support for those who have such concerns. Technical and financial support for producers of valuable feed with an impact on the zootechnization of agriculture. Training and technology transfer programs for farmers. Strengthening the role of livestock breeders' associations as the main lever for defending their interests.



Sheep breed: Blach head ofTeleorman .
Source: Teleorman Sheep Breeders Association



Tigaie variety rustinie. Reghin.
Original photo

CONCLUSIONS

The biodiversity of sheep breeds in Romania constitutes a strategic resource for sustainable rural development. Sheep farming plays a key role for the environment, including the maintenance of less fertile areas and the conservation of the landscape and sensitive ecosystems. Also, given their feeding behaviour, in which grazing plays an important role, they maintain flora biodiversity, protect wildlife and clean natural spaces by removing dry organic matter. Native breeds contribute to the resilience of farms, the maintenance of natural pastures and the agro-cultural identity of the country, as well as to the protection of the national zootechnical genetic heritage by organizing and supporting farms with elite animals. The integration of bioeconomy principles – resource reuse, product diversification, digitalization and genetic conservation – offers high potential for increasing