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## IMPROVING THE MANAGEMENT OF PASTORAL GROWTH AND EXPLOITATION SYSTEMS OF SHEEP

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**Abstract:** To intensify sheep productions and exploitation efficiency, the sustainable use of fodder resources, the relationship between grazing systems and ecosystems according to dietary preferences, the size of the flock, the sheep category, and the distribution of grazing should be taken into account. Thus, the authors consider it essential to identify solutions for the responsible use of fodder resources on the meadows for the sustainability of exploitation by establishing the number of sheep according to the type of plants and their nutritional value, maintaining a good relationship between grazing and the ecosystem through the management of environmental risks, and shaping behaviours that contribute to a good valorisation of the vegetative mass. Environmental management in pastoral systems should foresee measures regarding the requirements of grazing infrastructure, handling management, transport and navigation facilities and animal management, which have effects on both the vegetation and the quality of the land.

### • Introduction

An integrated management system in sheep production regardless of production specialization (SMI) should include all the systems of an organization to achieve the expected performance:

- "Quality Management System (SMCa)";
- "Environmental Management System (EMS)";
- "Safety Management System (SMS)";
- "Energy Management System (EMS)";
- "Food Safety Management System (FSMS)";
- "Compliance Management System (CMS)";
- "Information Security Management System (ISMS)".

The quality management system (QMS) in sheep breeding and exploitation should take into account the use of quality rams, their genetic quality, semen quality, superior quality, the quality of technological environmental factors: air quality, water quality, feed quality, pasture quality, grazing quality and pasture quality management, production quality, quality of products obtained, outstanding meat quality, poor quality of sliced meat, milk quality and wool quality, quality of the natural environment and quality of life of sheep, their welfare.

Intensifying sheep exploitation on professional farms involves finding the most efficient solutions for integrating production in the supply chain, which can be achieved by improving organizational management systems that include all components of the best integrated management system.

### • Material and method

Because sheep graze different types of plants on pastures selectively and can contribute to the degradation of grasslands, without control of livestock and production, the implementation of the best management of the exploitation, with effects on environmental factors and ecosystems, the authors of this paper carried out studies using methods of analysis of dietary preferences according to planned productions and categories of sheep, the most effective models of practical management and environmental risk, to:

- improve grazing systems depending on the quality of the pasture;
- analyse dietary preferences for the sustainable use of resources;
- preserve the natural environmental factors unaltered by regulating livestock and production;
- preserve ecosystems through vegetation management methods.

### • Results and discussion

Measures for monitoring the dietary preferences of sheep, to implement measures to reduce the waste of plant resources can be implemented by:

- improving vegetation management systems through modern grazing control methods;
- finding solutions leading to the sustainability of grasslands by controlling the size of herds and categories of sheep on pastures;
- using the most modern grazing methods to restore the vegetation cover and maintain the biodiversity of pasture ecosystems;
- improving the management of the natural environment.

Table 2. Techniques for improving grazing distribution management

Item	Managerial techniques
Luring sheep to unfavoured locations	<ul style="list-style-type: none"><li>- Mowing of less commonly consumed plants</li><li>- Placement of baiting spots with quality fodder</li><li>- Placement of salt in shaded areas</li><li>- Additional feeding location</li><li>- Placement of the water source in less preferred grazing areas</li></ul>
Forced distribution of sheep with a shepherd	<ul style="list-style-type: none"><li>- Fence along the range</li><li>- Sizing of pastures according to the quality of the feed</li></ul>
Grazing management strategies	<ul style="list-style-type: none"><li>- Rapid grazing</li><li>- Rotational grazing</li><li>- Reducing the grazing season according to resources</li><li>- Density of herds according to the productive capacity of the pasture</li></ul>
Considerations regarding the requirements of the herds to be exploited	<ul style="list-style-type: none"><li>- Class of animals (sheep, ram, lamb)</li><li>- Vegetation and land characteristics</li></ul>

### • Conclusions

To improve the management of pastoral systems for raising and exploiting different categories of sheep, management techniques are needed to improve the distribution of sheep grazing according to the productive capacity of the pasture, but grazing management is the most important factor, because it can improve the distribution of sheep and their density per area unit and increase the amount of accessible forage and the effective grazing capacity. Sheep can have a significant impact on the conservation objectives of the natural environment related to vegetation management, the control of annual grasses because sheep prefer other plants to grasses, and the control of broadleaf weeds is best done by sheep. To achieve these management objectives, grazing should be balanced with time and space and grazing capacity with the number of sheep available, because poor distribution results in erosion of intensively used areas, low production per ha and reduced harvesting efficiency because the pasture is under-utilized.