The global gene pool of the goat seriously under threat

Amongst the range of domestic livestock species, the goat is not just the 'black sheep' but a resource of survival in impoverished countries, and many breeds are at great risk of disappearing. This is the case according to researchers of the Regional Service of Agro-Food Research and Development in their first monographic study tackling the global impact of this species.

A study from the Regional Service of Agro-Food Research and Development (SERIDA) has analysed the situation of the global goat population. The study took into account the state of different breeds, the multiple implications of their conservation, the interaction with other animal species (wild and domestic) and the consequences of goat grazing from an environmental point of view. "The risk of the gene pool of the goat disappearing has increased due to intensive animal husbandry systems that use a very limited number of breeds. Strangely enough, the biggest loss in the genetic resources of indigenous animals has been observed in Europe, although the situation is unknown in many areas," as explained to SINC by Rocío Rosa García, researcher at SERIDA and coauthor of the study. The bad reputation given to goats stems from one of its main virtues: it has an extraordinary capacity to adapt to the most difficult of environmental conditions in places where other domestic livestock species would not survive. "It is a reality that the grazing of these animals can cause damaging effects on the environment but ecosystems become overloaded because of inadequate practices of handling," ensures the scientist. According to data from the Food and Agriculture Organisation of the United Nations (FAO), nowadays the largest number of goats can be found in the poorest of countries and especially those which have difficult environmental conditions and mountainous, desert and semi-desert regions. "In poor regions, poor communities are commonplace and often the goat is the only source of animal protein in their diet," explains Rosa García. The team led by Koldo Osoro Otaduy, manager of the Animal Production Systems Area at SERIDA and centre director, undertook a large part of the field work in areas in which the role of the goat is very

relevant and have certain similarities with hostile environments in other parts of the world. "Many national and international projects have been carried out in less-favoured areas, like the Asturian mountains which are home to steep slopes, poor soil, an aging population and a high risk of depopulation and abandonment of traditional activities," ensure the researchers. The goat: its virtues and defects Poor handling of grazing, which does not consider the livestock species and their most fitting habitat, is the main cause of the damaging effects that goats can cause on the environment. For example, the uncontrolled growth of the cashmere goat to increase production of its prized wool has meant in some cases that the ecosystems have become overloaded. This has not only affected vegetation but also certain indigenous species in India, China and Mongolia. To counteract this, the study also considers a large number of cases in which the species plays an important role in environmental conservation. These include their use in the fight against fires in areas dominated by bushes and in controlling exotic vegetation plagues that could put ecosystems at risk. "We wanted to perform a global review, taking into account very different regions of the world, from the Himalayan peaks to tropical areas, and analysing to what extent the goat competes with local fauna in each region and whether it interferes with the survival of the most sensitive species," outlines Rosa García. More information: Garcia, R. et al. Goat grazing, its interactions with other herbivores and biodiversity conservation issues, Small Ruminant Research 107 (2012) 49- 64.

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