

Sustainable utilization and development of animal genetic resources

ABSTRACT

Animal genetic resources for food and agriculture play a multi-functional role, especially in developing countries. They are not only a source of animal protein but serve many other purposes. The diversity of livestock breeds and species, and even populations, is the result of evolutionary process and the influence of man. Over the last decades, in the developed countries and in some developing countries, indigenous and local breeds have been either replaced or crossbred by specialized high yielding breeds. Indigenous/local breeds have a larger gene pool and are often more adapted to the local management systems and low quality feed, require low maintenance, and are less prone to diseases. The exotic commercial breeds, however, due to selective breeding and intensification of production systems, have narrowed genetic base and require high quality feed and management. Genetic diversity is crucial for animals to adapt to changing environmental conditions and market demands. It is also the base material for selection and improvement of livestock productivity. Genetic erosion is of global concern. Managing animal genetic resources is a challenge requiring strategic interventions as it affects the food security, trade and livelihood of farmers. The Global Plan of Action for Animal Genetic Resources was developed by FAO with four strategic priorities areas to facilitate this. This paper addresses the Strategic Priority Area 2 of this action plan of sustainable use and development. Requirements for sustainable utilization of indigenous breeds and development of breeding strategies for present and future benefits are discussed.

Keyword: Genetic diversity; Indigenous breeds; Niche market; Breeding strategies