

Assisted reproductive techniques as a tool for sheep production enhancement and genetic resources conservation

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Résumé

Today, animal production is facing increasingly challenging conditions due to consumer's needs, climate change and socioeconomic constraints. Under these pressures, the mastering of reproductive techniques becomes important for production enhancement through genetic improvement and conservation. Assisted reproductive technologies (ART) (included techniques such as artificial insemination (AI), in vitro fertilization (IVF), embryo transfer (ET), and sperm and embryo cryopreservation) has been promoted over the past years as a potential means to conserve and manage many species in the world. During the present lecture, different parts that address the role of assisted reproductive techniques will be presented and debated. An overview of sheep in Morocco and the role of reproduction control in genetic and production improvements will be presented. Then, the fine-tuning of managing male and female reproduction, which are the most important issues of artificial insemination, will be addressed. In addition, the role of semen cryo-conservation in maintaining biodiversity will be described. Besides, pregnancy diagnosis as a tool to support ART in sheep and the available techniques will be highlighted. At the end of the present lecture and to answer the question whether the ART technologies are matching the sector needs in Morocco an overview of the these techniques will be presented and the needs of meat production systems will be debated.

Keywords: Assisted reproductive techniques; sheep; production; genetic resources conservation