

XXIX REUNIÓN CIENTÍFICA Y TECNOLÓGICA,
FORESTAL Y AGROPECUARIA
II REUNIÓN INTERNACIONAL CIENTÍFICA Y
TECNOLÓGICA
VERACRUZ 2016

Title:

Biodiversity in small populations of livestock breeds

The preservation of animal biodiversity is recognized as a worldwide necessity and, from 1992 to date (Rio Convention on Biodiversity), there have been many steps taken in this regard.

The concept of biodiversity is multifactorial, many are the parameters to measure it but variability, and particularly genetic variability, fuels the engine of biodiversity. The study of the genetic variability of living organisms has had great boost with the progress of reading techniques first and then sequencing of DNA. To date there are many research tools available to obtain information from animal genomes. In the animal field, they are now popular chip with 1 million SNPs as well as rapid sequencing systems. For breeds with reduced numerical size there are however some constraints: - low informativeness of the panel of markers developed for cosmopolitan breeds; the need to bring together two concepts itself in opposition such as increased genetic variability and genetic improvement; - reference populations numerically small; - high cost-benefit ratio. It is advisable thus to find ad hoc approaches in terms of both appropriate molecular tools and modeling strategies in order to transform these breeds as an asset more than a problem. The preservation of diversity combined with the exploitation of the peculiarities of these populations should be an effort to be made in the near future.