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The Rescue Actions of Gembrong Goat from Extinction as Local Genetic Resources in Bali, Indonesia

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Abstract

Indonesia have several goat germplasm as local genetic resources, each has its own different characteristics appropriate to their natural spreading areas. Gembrong goat is one of the most critical population and endangered of Indonesian indigenous goat breeds. The Gembrong goats raised in Karangasem, Bali and have important roles in their rural agricultural systems, not only in a socio-economic but also socio-culture. Based on the report of the World Watch List for Domestic Animal in 1997 their population was 100 heads, while currently less than 50 heads. Conserving Gembrong goats urgently required, because their population decreased annually. Extinction and the loss of genetic material are irreplaceable. This paper summarised of some research and concrete actions by universities as conservation efforts that have been done for Gembrong Goats. Gembrong goat conservation efforts started in 2014, conducted by the collection of population data and identification of phenotypic characteristics. The research found that the population of Gembrong goats in Bali were only 26 heads, consisted of 10 head male and 16 head female. New Population of Gembrong goat has been intensively developed (ex-situ conservation) in Pacet, East Java and Sei-Putih, North Sumatra. In the following year carried out the conserving of the animal genetic material through of semen cryopreservation to improve the population, because the population growth with natural mating is very slow and having a problem especially the lack of superior male. The mating arrangement using frozen semen through the Artificial Insemination is a good action. In the last action have done by grading-up through natural mating by buck and AI by frozen semen with Etawah-crossbreds does to produce Gembrong-Etawah goats. The results of the rescue project have not been successful and satisfactory, there are still many problems encountered. The rescue actions of Gembrong goat should be sustainably maintained to protect local genetic resources.

Keywords: Bali, endangered breed, gembrong goat, local genetic resources, rescue action