Abstract

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Molecular techniques refers to methods used in molecular biology, biochemistry, genetics and biophysics which involve manipulation and analysis of DNA and RNA. Molecular techniques can also be used in biology to study genetic diversity and variation. Genetic diversity refers to the total number of genetic characteristics in the genetic makeup of a species. It shows similarity and variation that exist between breeds of the same species. Genetic diversity serves as a way for populations to adapt to changing environment. An increase loss of genetic diversity has been observed in most of agricultural species and particularly chicken genetic resources are considered to be the most threatened. Selective breeding by humans have led to the creation of many breeds characterized by high productivity, leading to the displacement of local breeds and posing a threat to the survival of many native breeds. Genetic resources are the building blocks for chicken development. The relevance of genetic diversity conservation in chicken production cannot be overemphasized because genes play a great role in formation of breeds and species. With recent advances in molecular technology, a number of techniques for in-depth genome analysis and evaluation of genetic variation in different breeds of chicken have been developed.