

## Genetic Diversity and Population Structure of Native Geese in Egypt Using Microsatellite Markers (Abstract)

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### ABSTRACT

The native geese are valuable sources of genetic material because of their adaptation to harsh conditions and their tolerance to a range of diseases. Assessment of genetic diversity is important to identify the native geese populations that are useful for food security and rural development. Geese can utilize cheap raw materials and produce significant amount of palatable meat. Additionally, geese had ahistoric importance in Egypt as they found on the walls of ancient temples. In the present study, the genetic diversity and relationships of three Egyptian geese populations were assessed using 12 labeled microsatellite markers (CK13, Aalϫ1, ANS02, ANS02, ZAAS004, ZAAS018, ZAAS023, ZAAS025, ZAAS036, ZAAS052, ZAAS152, and ZAAS173). Genomic DNA was isolated from blood samples of 90 geese collected from three Egyptian governorates: Kafer El-Sheikh, El-Fayoum and Luxor. The PCR products were electrophoresed on an ABI 3500xl DNA Sequencer. The basic measures of genetic diversity and phylogenetic trees were assessed using bioinformatics softwares. The information from this study should be useful for genetic characterization and for developing conservation programs of this agriculturally and commercial important species. The results confirmed also that the used microsatellite markers in assessing the genetic diversity among Egyptian geese are applicable.

**Key words:** Indigenous Egyptian geese, genetic diversity, Microsatellite

