

**ANALYSIS OF THE INFLUENCE OF PEDIGREE AND PERFORMANCE
RECORDING ON BREEDING DECISIONS IN KENYAN DAIRY GOAT
POPULATION**

ABSTRACT

Genetic gain in any livestock breeding programme is a function of response to selection which is in turn strongly determined by the accuracy of selection. However, selection accuracy is dependent on performance and pedigree recording, particularly on the quality of records and their use in making selection decisions. The success of a selection strategy is also hinged on the genetic variability and structure of a population. This study will investigate some of the probable causes of declining performances in Kenyan dairy goat populations. Non parametric procedures of SAS ver. 9.3 (2011) will be used to analyse the scope and accuracy of sampled pedigree and performance records kept within dairy goat populations as well as the use of these records to make breeding decisions. The structure and genetic variability of dairy goat populations will be assessed by carrying out a pedigree analysis of retrieved Kenya Stud Book dairy goat registration files using ENDOG ver.4.5 computer program. The program will analyse the pedigree files by computing several demographic and genetic diversity parameters including pedigree completeness index, generation interval, inbreeding and average relatedness coefficients, effective population size and gene origin statistics. Inbreeding trends, direction of gene flow and genetically important flocks will be determined to aid in management of genetic variability of the dairy goat populations.