

A panel of single nucleotide polymorphisms (SNPs) for genomic imputation and admixture proportion analysis in East African dairy crossbred breeds

Project Title: P728 - Activity 1.2.1: Genomic Tools Development and Application

Description of the innovation: Cost-effective high-density (HD) genotypes of livestock species can be obtained by genotyping a proportion of the population using a HD panel and the remainder using a cheaper low-density panel, and then imputing the missing genotypes that are not directly assayed in the low-density panel.

New Innovation: No

Stage of innovation: Stage 1: discovery/proof of concept (PC - end of research phase)

Innovation type: Research and Communication Methodologies and Tools

Geographic Scope: Regional

Number of individual improved lines/varieties: <Not Applicable>

Region:

- Eastern Africa

Description of Stage reached: Identification of the minimum number SNPs for imputations and admixture analysis

Name of lead organization/entity to take innovation to this stage: ILRI - International Livestock Research Institute

Names of top five contributing organizations/entities to this stage:

- SRUC - Scotland's Rural College
- UNE - University of New England

Milestones: No milestones associated

Sub-IDs:

Contributing Centers/PPA partners:

Evidence link:

- <https://cgspace.cgiar.org/handle/10568/96904>

Deliverables associated:

- D12753 - A conference paper on the impact of modelling and pooled data on the accuracy of genomic prediction in smallholder dairy data (<https://cgspace.cgiar.org/handle/10568/97872>)
- D8885 - Journal article on genetic tests for estimating dairy breed proportion (<http://hdl.handle.net/10568/89717>)

Contributing CRPs/Platforms:

- Livestock - Livestock