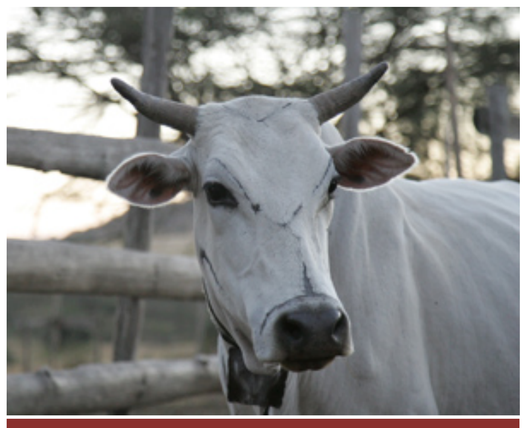
Livestock genomics for low-input systems

Karen Marshall and Steve Kemp



September 2014

Genomics for livestock feed

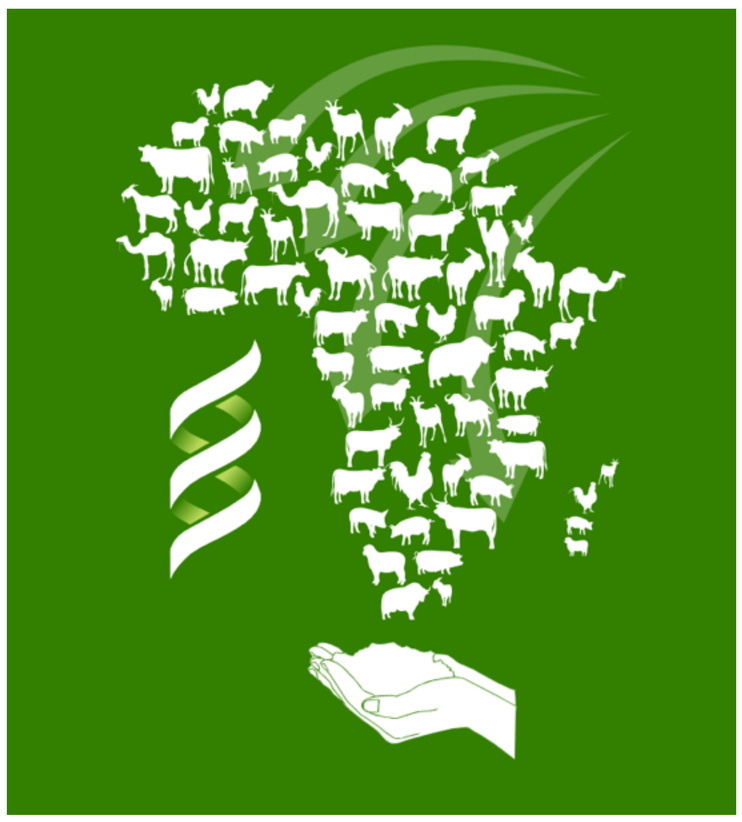
Genomics of common food-feed crops → improved nutritive value of crop stover

Genomics for livestock health

Identification of gene networks conferring disease resistance & use of genome editing approaches → creation of new disease resistant breed-types

Genomics for improved breeds

Genomic marker based assays for breed composition → in-situ breed comparison for identification of the most suitable breeds or cross-breeds



Genomics for food safety

Genomic marker based tests of animal source foods for pathogens → food quality assurance

Genomics for food safety

Genomics to trace or authenticate livestock products → improved market access

Genomics for improved breeds

Genomics to understand adaptation to heat and other environmental stressors → breeds fit for a future changed environment

Genomics for livestock health

Genomics to understand host-pathogen interactions and immune mechanisms → new vaccines and therapeutics

Genomics for improved breeds

Use of genomics in breed development →new cross-breeds or synthetic breeds with improved productivity and adaptedness

Genomics for livestock feed

Genomics of rumen microbes → improved rumen function for better utilisation of low quality feeds

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CGIAR RESEARCH PROGRAM ON Livestock and Fish

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Acknowledgements: The CGIAR Research Program on Livestock and Fish, International Livestock Research Institute (ILRI) and LiveGene - ILRI's Global Livestock Genetics Program

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September 2014