

# Germplasm for Dairy Development in East Africa

## Phase 1: Identifying appropriate germplasm and delivery mechanisms



The 'Dairy Genetics East Africa' project (Phase 1) seeks to determine the most appropriate genotypes for the range of dairy production systems and levels of production operated by smallholder farmers in East Africa, and how these genotypes can be delivered to smallholders. The project partners will apply high density single nucleotide polymorphism technology to determine breed composition of cows owned by smallholders, and combine this with traditional and participatory appraisal of animal and farm performance to determine which genotypes are most profitable at different levels of production. An assessment of the potential value of importing, testing and delivery of genotypes from elsewhere will be undertaken. The project will facilitate development of a partnership that has a sustainable business model to implement delivery of germplasm in a Phase II project and beyond. The project is implemented in the field in Kenya and Uganda but the delivery model will consider Rwanda as well. The project runs from 1 September 2010 to 31 March 2013.

### Overall objective

The overall objective of this Phase 1 project is to gather information and create partnerships and business models ready to implement in later projects (Phases 2, 3) that will sustainably deliver appropriate genotypes to smallholder dairy farmers in East Africa and assist implementation elsewhere in the developing world. The operational objectives within the project are:

**Objective 1:** Determine the appropriate genotypes that should be delivered to, and are demanded by, smallholder dairy farmers. The field work is in the temperate and sub-tropical systems of East Africa but we will investigate the feasibility of a subsequent pilot study in East African tropical dairy systems, depending on the experiences, baseline survey results, and impact on accuracy of assessment of genotypes in the highland systems. We will also undertake an assessment of at least one

existing South Asian tropical system, to determine whether the methods and results being applied here could usefully be applied elsewhere.

**Objective 2:** Develop a sustainable partnership and business model that is ready to source and deliver appropriate dairy cattle germplasm to smallholder dairy farmers of East Africa in Phase 2. Within this objective the project will facilitate the new partnership to develop a proposal for Phase II of the project to be submitted to funding partners if external resources are required to support the development of a sustainable delivery system.

### Expected outputs

- Dairy genotype(s) appropriate for the range of smallholder dairy systems in East Africa identified
- Partnerships and business model(s) for delivery of the identified genotype(s) developed and ready for implementation

This project's success hinges on the participation of small holders dairy farmers and their willingness to share their knowledge and practices. The project works with a range of stakeholders, including government departments responsible for Livestock and Veterinary Services, Heifer Kenya and Uganda Country offices and the East Africa Dairy Development (EADD) Project among others.

### Partners/Contact

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