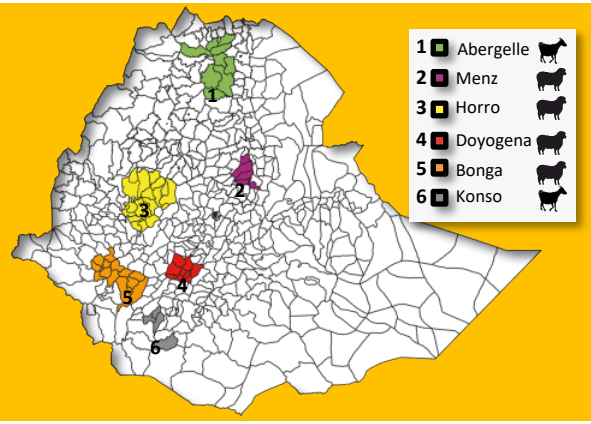
Context

- After successful establishment of pilot community-based sheep and goat breeding programs in Ethiopia, the next step was to develop strategies to reach a larger proportion of the sheep and goat populations
- Solutions for wider dissemination of improved genetics had to be efficient, low-cost and be built preferably on locally accessible inputs



Location and breeds of the six community-based breeding programs (CBBP) in Ethiopia

Our innovative approach

Establish low-cost, low-infrastructure reproductive platform combining:

- Low-cost synchronization: a simple protocol of 2 injections of a prostaglandin analogue (Enzaprost) 11 days apart achieved fertility levels of up to 89% in natural mating and up to 61% in artificial insemination.
- Service delivery for ultrasound pregnancy diagnosis to accompany the synchronization protocol, to assess success of artificial insemination and to screen for reproductive pathologies
- Low infrastructure artificial insemination protocols with fresh and cooled semen

POVERTY REDUCTION, LIVELIHOODS & JOBS

Low-Cost, Low-Infrastructure Reproductive Platform to Nurture Community-based Breeding Programmes in Ethiopia

Outcomes

- First time ever in Africa, a network of reproductive hubs was established in proximity of the main sheep and goats breeding programs
- The low-infrastructure, mobile laboratories are operational delivering artificial insemination and other reproductive services .
- Researchers, vets and extension staff have received advanced, focused trainings on sheep and goat reproduction and reproductive biotechnologies.

CGIAR RESEARCH PROGRAM ON Livestock

GENETICS

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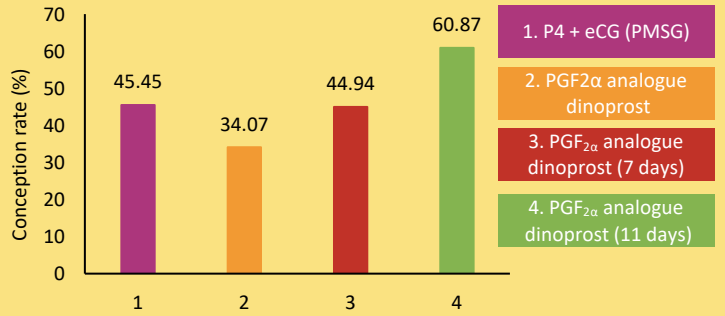

- P4 + eCG (PMSG): standard protocol using progestogens priming and gonadotropin
- PGF2α analogue dinoprost: single injection of prostaglandin
- $PGF_{2\alpha}$ analogue dinoprost (7 days): 2 injections of prostaglandin 7 days apart
- $PGF_{2\alpha}$ analogue dinoprost (11 days): 2 injections of prostaglandin 11 days apart

Future steps

- Gradual handover of the platform to the National Animal Genetic Improvement Institute.
- The reproductive platform presents several opportunities for public-private partnerships and business models in artificial insemination.
- Development of similar reproductive platforms to support scaling of CBBPs in Tanzania and Sudan

Partners

Regional Agricultural Research Institutes in Ministry of Agriculture, Ethiopia

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