Community-based goat breeding programs in Malawi: set-up and first experiences

Wilson Nandolo [1,3]   Maria Wurzinger [1]   Gábor Mészáros [1]   Curt van Tassell [2]   Timothy Gondwe [3]
Henry Mulindwa [4]   Doreen Lamuno [1]   Johann Sölkner [1]

[1]University of Natural Resources and Life Sciences (BOKU), Dept. of Sustainable Agricultural Systems, Austria; [2]USDA, United States; [3]Lilongwe University of Agriculture and Natural Resources; [4]National Agricultural Research Organization (NARO), National Livestock Resources Research Institute, Uganda

What's this work about?

The African Goat Improvement Network (AGIN) is trying to improve goat production in Malawi

Strategy

Genetically improve goats through selection in community-based breeding programs

Philosophy

- **K**eep
- **I**t
- **S**imple and
- **S**ustainable

Stage →	Stakeholder awareness, community identification	Definition of breeding objectives	Assembly of breeding populations	Data recording & data management	Buck selection & management
Outputs →	Stakeholders supported the project idea. 2 sites were identified and characterized	Farmers prefer bigger animals with higher twinning rates. They agreed to share selected bucks for breeding	Goats were ear-tagged (291 farmers, 2556 goats). Tissue samples were collected for genotyping	Pedigree and performance data were collected	Bucks were selected from February 2016. Farmers made rules for ownership, sharing and utilization of selected bucks
Issues →	-	-	A few farmers were reluctant to have their goats identified	Late reporting of kid births	Farmers were not willing to freely share their bucks, despite initial assurance. Arrangements were negotiated.
Lessons and experiences →	Goats had high off-take rates	Same breeding objective, different weights on traits	Improving local animals without bringing in new genetic resources is a new idea	If a recording system is simple enough, useful performance data can be acquired	Buck sharing issues should be sorted out thoroughly before the first selection

The buck selection process

- Bucks were ranked into three categories based on weight at 4 months
- Farmers were asked to re-categorize the bucks using any other criteria of importance to them
- They selected bucks deemed good for breeding (mostly from the best category)

Current status and way forward

- Selected bucks were distributed and utilization has started
- Data recording is being done and further buck selections will be done every 6 months

Conclusion

- Community-based goat breeding programs may work
- Pay close attention to the specific circumstances of the community and the local environment