



IMPROVED GOAT BREEDS

The drylands of Ethiopia's South Omo zone and Uganda's Karamoja sub-region are home to thousands of pastoralists who migrate with their livestock in search of pasture. In both locations, disease, drought and degraded grasslands have cut the size of herds, so although goat rearing is common it is unproductive. These regions are also characterised by high poverty rates and chronic malnutrition. The Livestock for Livelihoods project's baseline report conducted in 2018 reported that 68.4% of women in Karamoja and 36.5% of women pastoralists in South Omo were living below the poverty line of US\$1.90/day.

Goat milk can provide most of the essential nutrients and energy required by growing children. However, pastoralists mainly keep local goat breeds, which produce very little milk. Local goat breeds have the advantages of being able to survive and thrive in challenging climates, with low-quality forage and fodder, and are to some extent resistant to common diseases. Conversely, exotic, high-yielding goat breeds produce a lot of milk but don't adapt well to the environments in Karamoja and South Omo.

An assessment conducted at the start of the project in 2018 showed that access to breeding services was very low in both South Omo and Karamoja. The assessment also revealed that there were no private breeding service providers in Uganda or Ethiopia.

Farm Africa through the Livestock for Livelihoods project supported local communities to crossbreed local goats with exotic, high-yielding goat breeds to produce offspring that are faster growing, more efficient feed converters and produce more milk and meat than the local goats but which are easier to raise than purebred exotic goats.

Through strengthening breeding and livestock health services Farm Africa increased livestock productivity, meaning that pastoralist women are able to generate greater income from the small-scale goat-rearing enterprises they set up with support from the project. Through complementary nutrition training, the project also ensured that improved goat production translated into improved diets for households.



Livestock for Livelihoods

Farm Africa's Livestock for Livelihoods project helped Ugandan and Ethiopian pastoralist women establish Women's Livestock Groups that rear and add value to goats, run savings and loans associations that support the development of small-scale businesses and learn how to improve their families' nutrition. This booklet is one of a series of four focusing on different project components:

1. Revolving goat fund
2. Improved goat breeds
3. Community animal health workers
4. Women and children's nutrition in Uganda

Project duration:

The project ran from 2 March 2018 to 31 July 2021. This booklet was written in July 2021.

Project budget:

£3,845,000, of which £3,370,000 was provided by UK aid from the UK government.

THE APPROACH

Farm Africa supported the women beneficiaries in the project areas to establish Goat Breeders Associations who managed goat breeding stations where the exotic, high-yielding goats that are suited to the local landscape and climate were bred and sold. At the same time, buck rearing stations managed by selected women beneficiaries were set up where goat owners could bring their local does to crossbreed them.

Why goats?

Goats are widely distributed in diverse habitats and adapt well, they can thrive in variable temperatures during food and water shortages. They breed all year round in tropical zones, have a short gestation of only five months and often produce twins. Goats are also a useful source of financial security for communities as they can be easily and quickly sold for cash to meet other family needs.

Selecting improved breeds

Farm Africa conducted breed assessments in both countries to identify suitable dairy goat breeds that could be crossbred with the local goats and adapt well in the harsh climates in the pastoral areas.

Findings from locally conducted research indicated that there are no dairy goats in the pastoralist zones. The most common goat breeds found were the local small East African, Somali and Mubende goat breeds, which have low production capacity both in terms of meat and milk. As a result, crossbreeds with 50 – 75% exotic genes were recommended for the project, namely Toggenburg in Uganda and Boer bucks in Ethiopia. In South Omo, indigenous dairy goats like the Afar and Konso were also gradually introduced in collaboration with the Jinka Agricultural Research Centre. The bucks were procured from accredited breeders and the genetic composition was verified using breeding records.

Piloting a private buck breeding SME in Uganda and a commercial breeding association in Ethiopia

The project tested multiple approaches to livestock breeding. In Karamoja, where there is an established supply chain of improved goat varieties, the project partnered with a local, private goat breeder to pilot the establishment of a commercial breeding station to ensure a continuous supply of improved bucks beyond the project lifetime. At the station, Toggenburg goats were multiplied through controlled breeding to produce offspring of 50% and 75% Toggenburg genes. The bucks produced were used to replenish the established buck stations in the communities.

Buck keeper Longoli Paska from Karamoja, Uganda, pictured with her husband Logiela John and the two Toggenburg bucks she received from Farm Africa.

In South Omo, the project worked with Jinka Agricultural Research Centre to establish a breeding association comprised of the beneficiaries and run by more literate members of the community. These pilots of community-based services were established to promote independent private services as capacity was built. As of April 2021, 146 pastoralists and agro-pastoralists in Uganda and 295 in Ethiopia were accessing breeding services annually.

Alongside this, community-based breeding through Women's Breeder Associations (WBAs) and Rangeland Management Committees (RMCs) was also established, with a selection of members from the Women's Livestock Groups (WLGs) chosen to become buck keepers. The breeding service is offered at a small fee to the community members and the money collected is used to treat the bucks when they are sick.

Livestock health

Livestock health services play a crucial role in reducing livestock mortality and maintaining healthy, highly productive and therefore valuable livestock herds. New bucks procured for the community were held in an isolated location where their health and performance were monitored to ensure only healthy and disease-free bucks were distributed to beneficiaries. Once distributed, the exotic bucks were closely monitored and taken care of while they acclimatised to the new environment for at least two weeks before they were bred with the local goats.

Tick-borne diseases are a common challenge in both regions, and therefore a robust animal health service delivery system was established before the bucks were distributed. With support from the project, the selected buck keepers (all women) were able to construct proper buck shelters and were provided with the equipment and drugs required to regularly spray and deworm their bucks to protect them from tick-borne diseases and worms. Other members of the community were encouraged to routinely spray their local goats against ticks to protect the bucks from getting ticks during breeding.

The project has created a network of community animal health workers (CAHWs) linked to agro-input dealers to enhance pastoralists' access to quality animal health services. Farm Africa has trained the CAHWs on goat management, equipped them with vet supplies and goat routine management equipment like hoof trimmers and burdizzos (castration devices). Each CAHW was linked to a WLG to offer routine goat health and management services. The CAHWs were also linked to the government veterinary office for supervision and technical support.

RESULTS AND LESSONS

The Livestock for Livelihoods project's baseline report conducted in 2018 reported that the average household revenue from the sale of goats and goat products was ETB 1,795 in Ethiopia and UGX 32,714 in Uganda. The annual household survey conducted in April 2021 showed an increase in this income of just over 400% in Uganda to UGX 167,200 and of 38% in Ethiopia to 2,482 ETB. This is attributed to the animal husbandry training delivered to members of the WLGs and increased adoption of animal husbandry practices. The training and continuous engagement in the project activities have increased the level of awareness among women on the potential of the sale of goats to meet other basic needs. The leadership and group dynamics training also equipped the women with decision-making skills especially on management and sale of livestock.

Failing to develop a sustainable supply of high quality goat breeding stock can be a major weakness in goat projects, which leads them to diminish after a few years. By signing Memoranda of Understanding and working with the Jinka Agricultural Research Centre in Ethiopia and the National Agricultural Research Organization in Nabuin, Uganda, the project developed a sustainable supply of high-quality bucks through the creation of the local community managed buck stations.





The introduction of Boer goats for breeding is in line with the ongoing goat breed development strategic focus in Ethiopia. Selecting a suitable ratio of higher-yielding goats to local breeds was done through community consultations and a breed assessment. It was also beneficial to ensure appropriate selection criteria of the goats, ie big female goats and small male goats to reduce the size of offspring and avoid kidding issues to make the change to the new goat breed mix acceptable to the pastoralists.

There is an essential need to uplift the skills of farmers to get the best out of the new breeds and develop reliable healthcare systems outside the under-funded, patchy delivery of government veterinary systems. The project did this through the creation and extension of the network of CAHWs who supported the project by conducting regular follow-ups on the bucks in the community and support disease reporting.

Focus group discussions with the pastoralists confirmed a willingness to pay for improved services, including those of the CAHWs. This helped the project from being restricted by the poor performance of public systems and supports the commercialisation that is necessary to develop drug supply chains and close the loop, ensuring that market-based animal health networks and breeding services will meet the demand of pastoralists.

For ongoing sustainability, pastoralists must see the benefit of the improved breeds and be willing to pay for improved services. The value of the improved breeds was demonstrated through awareness

training, learning exchange visits to commercial dairy goat breeders in Kenya and through demonstrating the fast growth rates exhibited by the crossbred kids that had already been born.

In some communities in Karamoja, Uganda, pastoralist men were already seeing the benefits and importance of the exotic bucks in improving the offspring of local goats. Consequently, they were increasingly wanting to have a say in how the bucks given to the women are managed. The project engaged the spouses of the members of the WLGs during community meetings, distribution of goats, buck station construction and goat management. This ensured that the men understood the benefit the project will have to the family as a whole. The project created improved gender awareness, encouraging men to be involved in the project but ensuring that the women retain control and ownership of the goats.

The success of the approach is entrenched in the multifaceted nature of the project, which ensured that pastoralists are also trained in goat husbandry, feed and fodder production and storage, dietary benefits of goat products, business skills, financial literacy and group dynamics.

As access to money is a challenge amongst the beneficiaries the project encouraged the women to participate in Village Savings and Loan Associations (VSLAs) to mobilise savings. In the VSLAs some women created a goat fund kitty where they are contributing small amounts which they can then borrow from to buy drugs to treat any sick animals.

Farm Africa promotes sustainable agricultural practices, strengthens markets and protects the environment in rural Africa.

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