



## 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 are 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 showed that access to breeding services was very low in both South Omo and Karamoja. The assessment also revealed that there are currently no private breeding service providers in Uganda or Ethiopia.

Farm Africa helps 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 is increasing 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 is also ensuring that improved goat production translates into improved diets for households.



### Livestock for Livelihoods

Farm Africa's Livestock for Livelihoods project is helping Ugandan and Ethiopian pastoralist women set up sustainable, small-scale goat-rearing enterprises that improve nutrition amongst women and children and lift families out of poverty.

This booklet is one of a series focusing on the project's key components:

1. Revolving goat fund
2. Improved goat breeds
3. Community animal health workers

The project runs from 2 March 2018 to 31 March 2022. This booklet was written in April 2020. Further results and lessons are expected at the end of the project and will be published then.

Project budget:

£5,060,000, of which £3,765,000 is provided by UK aid from the UK government.

## THE APPROACH

Farm Africa established community-run goat breeding stations where the exotic, high-yielding goats that are suited to the local landscape and climate are bred and sold. And at the same time, established buck rearing stations where goat owners can 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 breed

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 are also being gradually introduced in collaboration with the Jinka Agricultural Research Centre. The bucks were procured from accredited breeders and the genetic composition is being verified using breeding records.

### Toggenburg goats

Originate from the Toggenburg Valley, are brown in colour with a white line on the face, legs and tail. Males weigh 70-110 kg, with the females much smaller at 60-70kg. They can produce up to five litres of milk per day, with a relatively high-butterfat content.

### Boer goats

Developed in South Africa in the early 1900s, their name is derived from the Afrikaans word boer, meaning farmer. Standard Boer goats have white bodies and distinctive brown heads. They are noted for being docile, fast growing, and having high fertility rates. They produce high-butterfat milk.



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

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

The project is trialling multiple approaches to livestock breeding. In Karamoja, where there is an established supply chain of improved goat varieties, the project is partnering 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 will be multiplied through controlled breeding to produce offspring of 50% and 75% Toggenburg genes. The bucks produced will be used to replenish the established buck stations in the communities.

In South Omo, the project is working 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 have been established with a view to promoting independent private services as capacity is built.

Alongside this, community-based breeding through Women's Breeder Associations (WBAs) and Rangeland Management Committees (RMCs) are also being 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 are held in an isolated location where their health and performance are monitored to ensure only healthy and disease-free bucks are distributed to beneficiaries. Once distributed, the exotic bucks take time to acclimatise to the new environment and close monitoring and feeding is required for another two weeks before they breed with the local goats.

Tick-borne diseases are also a common challenge in both regions, and therefore a robust animal health service delivery system should be put in place before the bucks are distributed. The project supported buck keepers to construct proper buck shelters and beneficiaries 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 has been linked to a WLG to offer routine goat health and management services. The CAHWs are also linked to the government veterinary office for supervision and technical support.





## RESULTS AND LESSONS

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 has sought to develop a sustainable supply of high quality bucks through the creation of the local community managed buck stations.

Use of Boer goats for breeding is in line with the ongoing goat breed development strategic focus in Ethiopia. Selecting the suitable ratio of higher-yielding goats with the 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 is doing this through the creation and extension of the network of CAHWs who will help the project to conduct 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 will help the project from being restricted by 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 have already been born.

In some communities in Karamoja, Uganda, pastoralist men are already seeing the benefits and importance of the exotic bucks in improving the offspring of local goats. Consequently, they are increasingly wanting to have a say in how the bucks given to the women are managed. The project is creating improved gender awareness, encouraging men to be involved in the project but ensuring that the women retain control and ownership of the goats.

Ongoing success of the approach is entrenched in the multifaceted nature of the project, which ensures 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 Loans Associations (VSLAs) to mobilise savings. In the VSLAs some women have 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.

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