

Stories of change

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Bridging gender gaps with dairy goats and root crops

By Faustin Paul Lekule, Joyce Lyimo-Macha, Devotha Mosh-Kilave and Deogratias Dominic Shayo

Key messages

- Introducing dairy goats in semi-arid regions of Tanzania has led to farmers earning US\$160 from milk sales during the first lactation, as well as an increase in household milk consumption.
- Female heads of households and women in male-headed households now own dairy goats, control income from sales of milk and make joint and independent decisions on overall management.
- Cassava and sweet potato leaves are a significant feed supplement, providing better feed-to-live-weight conversion rates (a 15-28% increase) than traditional alternatives.
- Diets have diversified among project farmers, to include cassava, sweet potato and goat milk.

and customs, which put them at a disadvantage compared to men. However, dairy goats are suitable for smallholder farmers - including women - as they provide food and income, reproduce regularly each year and require little feed. In a previous study in Tanzania, keeping dairy goats was shown to be profitable, contributing 25% of total household income (Jackson *et al.*, 2012). In addition, goat milk is rich in vitamins (A and B2), proteins and carbohydrates, and these nutrients are easily absorbed by the body. Goat milk is therefore particularly beneficial for infants, sick people and the elderly.

As a means of boosting household food security and nutrition in resource-constrained, semi-arid areas of Tanzania, a system of integrating dairy goats (Toggenburg and Norwegian breeds) with production of cassava and sweet potato is being studied. The research is focused on finding ways to enhance the adaptation of the goat breeds in the area, while also testing and promoting four improved varieties of drought-tolerant and nutrient-rich cassava and sweet potato for human consumption and dairy goat feed.

The project has specifically targeted women and female-headed households in Kongwa and Mvomero districts, in central and eastern

Context

Women in agro-pastoral societies in Tanzania typically have low incomes, limited access to resources and are of poor nutritional status. They also tend to be constrained by traditions





Mama Gestelina Hambo and her husband Juma Hambo work together to milk one of their dairy goats in Kunke Village

Tanzania; malnutrition rates in these areas are among the highest in the country. However, as well as aiming to support food production for both people and goats, the project also aims to increase income from the animals and from sales of root crops. The methodology applied also addresses gender roles, access, control and ownership of resources, and decision-making among smallholder farmers.

Emerging outcomes

Enhanced decision-making and sharing of roles

In any intervention, increased workload can result, and in most cases women carry a higher burden. In this project, a systematic approach was used, coupled with intensive training, in order for men, women and youth to share roles and responsibilities in feeding, watering, cleaning, milking and general management of dairy goats and farm activities relating to the introduced technologies. As a result, women are now involved in goat breeding, including heat detection and supervision of the mating process, and record-keeping on production and reproduction parameters. The sharing of household chores, such as collecting water, fodder and fuel wood and cleaning of the

household surroundings, has resulted in a reduction in women's workload.

“ Since we started keeping goats my husband and my children take turns in collecting water for them. Last week I came down with malaria and my husband cleaned the barn, fed the goats and brought water not only for the goats but also for home use.

Tabia Mapya, Masinyeti, Dodoma

Increased access to resources and greater income

Previously, women had limited access to, and ownership of, resources. However, through the project, 45 female-headed households (out of 111 households in total) now own dairy goats. Women in male-headed households also own many of the 224 dairy goats supplied through the project, controlling sales of milk and making joint decisions on overall management and sales.

“ I am happy now that I don't have to ask my husband for money to buy salt or sugar and even some small stuff for myself.

Mwajuma Said, Kunke, Morogoro

Improved nutrition

In the past, women did not realize the importance of providing goat milk to children. Following the introduction of this project, farmers are diversifying their diets by including goat milk, which is fed to children and sick people and also included in families' daily meals, contributing to a balanced diet and improving their nutritional status.

For example, women are making goat milk yoghurt, which is consumed with staple foods. During the first lactation, farmers have been able to earn US\$160 from milk sales from two dairy goats. However, it is anticipated that this income will increase as production increases from the current 600 ml per goat per day to an expected 1.5 - 2 litres per goat per day as the animal matures. Women control the income earned from milk, which they use to purchase small household items such as salt, soap, cooking oil and exercise books for children.

Women and men have accepted the four improved root crop varieties and adopted best practices such as planting on ridges. Field trials



Pamela Meena, checks five year old Fadhila Abdullah for signs of malnutrition

show that both cassava and sweet potato leaves have higher protein and are significantly better feed supplements, with a better feed-to-live-weight conversion ratios compared to traditional alternatives such as sunflowers.

“ I drink goat’s milk although not every day. At the beginning I did not like its taste because I was not used to it. But now I take it with tea twice per week before I go to school. ”
Sikuzani Hamis Bakari, Kunke, Morogoro

With time, increased income and consumption of root crops will also be expected as more

farmers adopt the improved varieties; the additional consumption will lead, in turn, to improved nutrition.

Conclusion

Integrating root crops and dairy goats has changed and improved gender relations in terms of women’s participation in project activities, division of labour, access, control and



Improved varieties of sweet potato have boosted yields



Women are controlling sales of milk

ownership of resources and shared decision-making. Project interventions are also leading to dietary diversification that will improve the nutritional status of families, particularly women and children.

During 2014, over 100 goats will be passed on to new groups of farmers. A large number of farmers have already shown great interest in obtaining dairy goats, which is a testimony to the advantages of keeping them. In view of this, it is likely that the dairy goat system will be adopted and adapted by farmers even after the project ends.

The study provides a model for establishing dairy goat enterprises in other arid or semi-arid areas. It has created new hope in the test communities in Tanzania, where agricultural productivity is low and malnutrition is high, especially among children. The project outcomes suggest that the introduction of dairy goats and root crops in semi-arid regions in Tanzania provides an important supplementary food and nutrition source, as well as leading to improved gender relations.

References

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Contact

Prof. Faustin Paul Lekule: lekulefp@yahoo.com
Deo Gratias Shayo: deogratiasd@gmail.com



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