

NURU KENYA

2023 Dairy Impact Brief



RAY MARSHALL CENTER FOR THE STUDY OF HUMAN RESOURCES

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INTRODUCTION

Nuru Kenya (NK) was established in 2008 with the goal of enabling meaningful choices for vulnerable communities to lift themselves out of poverty. Their multifaceted approach addresses food insecurity, ability to cope with shocks, and addressing unnecessary disease and death. NK has since been engaged across the sectors of agriculture, financial inclusion, and healthcare. This report will focus on NK's impact in the dairy sector as part of an integrated livelihood diversification strategy. This dairy program began in Migori county in 2017, and has since expanded to neighboring Homabay, the second county of operation for NK. This report focuses on the Migori county dairy program after 7 years of impact.

To track data and report on successes, NK's monitoring, evaluation, and learning team works with Nuru International support, in partnership with the Ray Marshall Center (RMC) at the University of Texas, Austin. Working as a group, Nuru Kenya leads on the collection and cleaning of data, and Nuru International and RMC report on the relevant findings. This the 6th annual report on the dairy program of Nuru Kenya since its inception in 2017. The primary metrics of success for the dairy program encompass improved yields and incomes for farmers, along with improved practices for taking care of the health and production of animals. Additional programs include fodder production, and artificial insemination. The households who are members of the NK dairy program are often also members of farmers cooperatives supported by NK, which assist in training and aggregation activities with the farmers over the course of the year.

METHODOLOGY

This report summarizes the results of the 2023 dairy activities at NK. The following data represents a continuation of data collection for Migori county, where NK began the dairy intervention in 2017. These assessments aim to answer the question: *What is the impact of the NK Dairy Program this year? Further, have there been sustained progress and results?*

This year's survey is a sample survey taken from the overall population of NK dairy farmers, representing 246 farmers in Migori county. Overall, NK works with 3,525 farmers located within 56 cooperatives. 23 of these cooperatives work in the dairy value chain. Reporting on the success of NK interventions with these farmers, research questions aimed to capture impact against the following indicators:

- Dairy yield (average liters of milk per cow per day)
- Best practices used (artificial insemination, growing fodder, deworming, and vaccination)

YIELDS & INCOMES

In 2023, Nuru households generated an average of \$278 USD in profit per year per cow from the sale of dairy. In 2022, Nuru households generated \$237 USD from the sale of dairy. This year's \$278 USD figure represents an 18% increase from the previous year, and a 229% increase over the baseline value of \$85 in 2017. Despite the modest rise in the average milk yield per cow per day this year, from 3.22 to 3.23 liters, farmer households have consistently increased their incomes from dairy. This increase in income stems from various improvements, such as an increase in the number of milking days annually, and higher sale prices at the cooperative. In addition, Nuru farmers are taught best practices to ensure the optimal health and production of their animals.

Another significant advantage for Nuru farmers lies in their cooperative memberships, providing them with enhanced bargaining power, collective training on best practices and livestock management, and improved access to sales opportunities. Additionally, the dairy value chain was improved through cold storage to properly and safely manage quality control and food safety for consumers. Through best management practices training, increased milking days, expanding access to and capacity of farmers' cooperatives, and enhancing the dairy value chain, Nuru Kenya farmers have achieved a remarkable sixth consecutive year of increased income.

Figure 1. Average milk yield per cow per day, 2017-2023 (Migori)

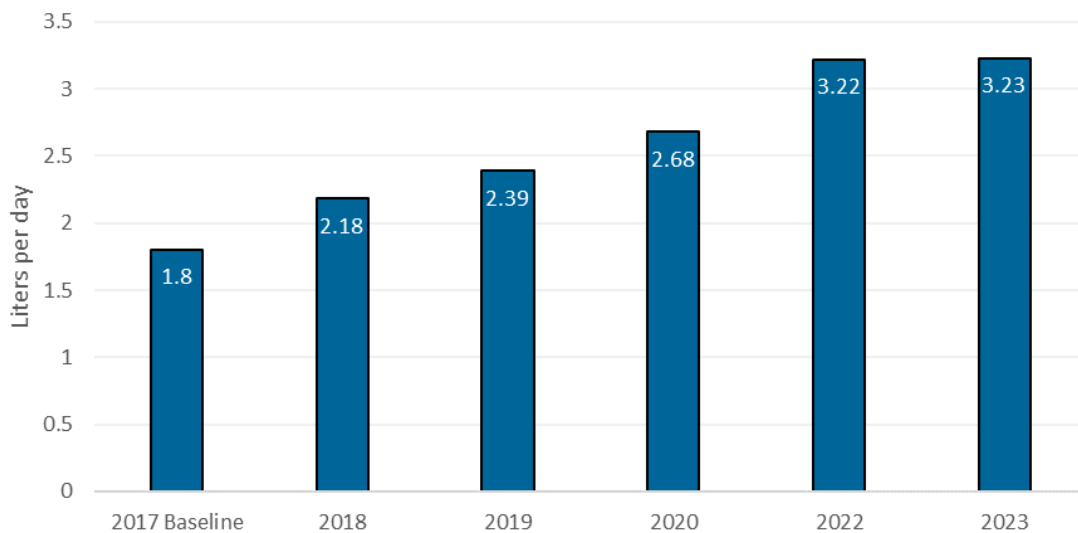
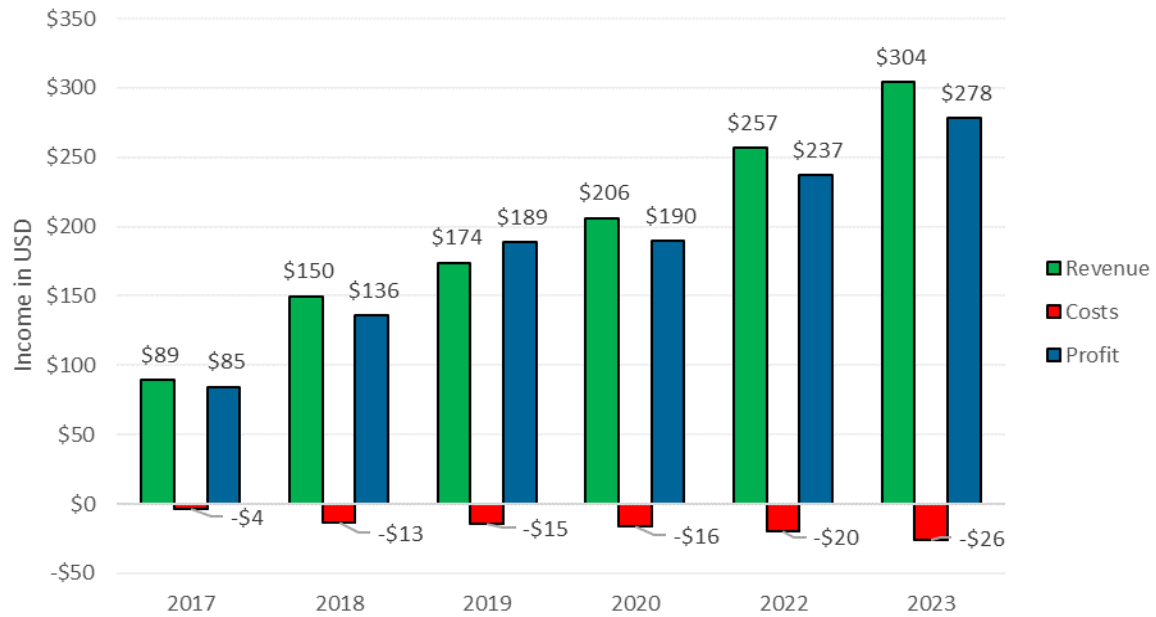


Figure 2. Average income per farmer, Dairy, 2017-2023



BEST MANAGEMENT PRACTICES

This year for evaluation, Nuru Kenya continued the evaluation of 4 Best Management Practices (BAPs). These 4 practices have been tracked in Nuru Kenya since program inception, and are linked to higher overall production, health of the cows, and ability for farmers to mitigate a variety of economic and environmental shocks they might experience over the course of the year. These practices include improved breeding (AI), vaccination, improved fodder production, and routine cow deworming.

Out of the 308 individuals surveyed across both Homabay and Migori who were producing milk, 67 (22%) have used AI services, 270 (88%) cultivate fodder, 94 (31%) have vaccinated their cows against at least 1 of the recommended diseases, and 305 (99%) regularly practice deworming. Overall, 113 (37%) of the 308 farmers practice at least 75% of the practices taught. At this level, practicing at least 3 of the 4 practices taught, NK would consider this farmer as an “adopter.” During this past year, due to substantial liquid nitrogen shortages from freezing and transporting the sperm used for AI, many farmers were not able to access these services from NK, resulting in a lower than expected adoption rate for this practice in particular.

CONCLUSION

Since 2017, the Nuru Kenya dairy program has continued to improve the lives of smallholder farmers through diversified livelihoods and the power of professional agribusinesses. Over the 7 years since inception, Nuru Kenya has realized consecutive increases in farmer yields and income each year, alongside adoption of key practices to improve overall animal health and longevity. In 2017, the average farmer was producing only 1.8 liters per cow per day, and earning only \$85 of profit per year from this yield. Today, farmers are seeing an average of 3.23 liters per day per cow. Furthermore, the average number of cows per farmer has increased from 1 to 1.5 over the course of interventions in Migori county, meaning that the average farmer registered with the Nuru Kenya dairy program can expect to yield 4.85 liters of milk per day. This milk, sold at roughly 47.5 shillings per liter equates to \$1.50 per day, or \$417 per year cost inclusive. It should be noted that Nuru Kenya focuses on a model of sustainable intensification of production, with the goal of increasing yield per cow and not overall number of cows to account for negative climate and emissions externalities.

In rural southwestern Kenya, \$417 per year of added profit can allow a family to afford healthcare expenses, send children through school, purchase additional nutrient-dense foods previously inaccessible, and respond to increasing economic and climatic shocks and stressors over the course of the year. Moving forward, Nuru Kenya will continue to support these farmers and the farmer cooperatives leading the effort to end extreme poverty in the region. Key findings from this 2023 dairy impact brief are as follows:

- Nuru dairy farmers experience the 6th consecutive year of increased yields and incomes over the 2017 baseline.
- Incomes increased to \$278 net profit per cow, an increase of 229% over the baseline value of \$85.
- Yields increased to 3.23 liters per cow, an increase of 80% over the baseline value of 1.8 liters per cow.