

Measuring dairy productivity's impact on dietary quality among Tanzanian farmers

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The TADB/TI3P loan program

The Tanzania Inclusive Processor-Producer Partnerships in Dairy project (TI3P) is a three-year initiative (2022-2025) co-funded by the Bill & Melinda Gates Foundation and implemented by the Tanzania Agricultural Development Bank (TADB), in collaboration with the Ministry of Livestock and Fisheries, Land O'Lakes Venture37, and Heifer International. Through TI3P, TADB provides loans across the dairy value chain.

We hypothesized that TADB loans and increased dairy production could improve farmers' diets in two ways:

1. Directly, through increased dairy consumption
2. Indirectly through purchase of improved foods

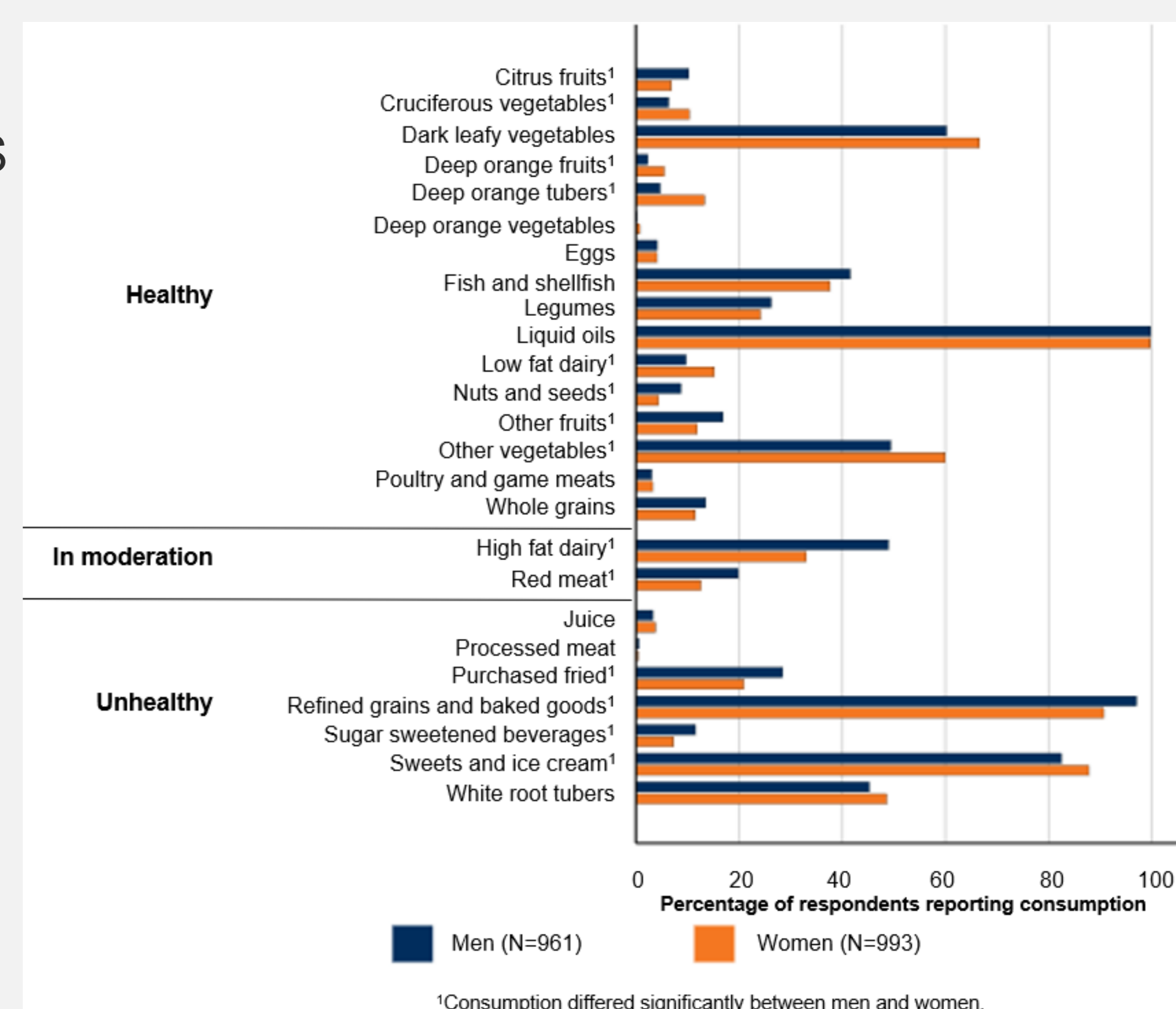
Key findings

Diet quality was similar among men and women.

Men and women reported similar GDQS scores (17.3, p-value = 0.835). There were also no significant differences in diet quality by household's loan holding status.

Men consumed more milk than women.

Men consumed significantly more dairy than women (0.2 vs. 0.1 liters); however, only 58% of men and 47% of women had consumed any dairy in the previous day. We observed no differences by loan holding status.



Study design and methods

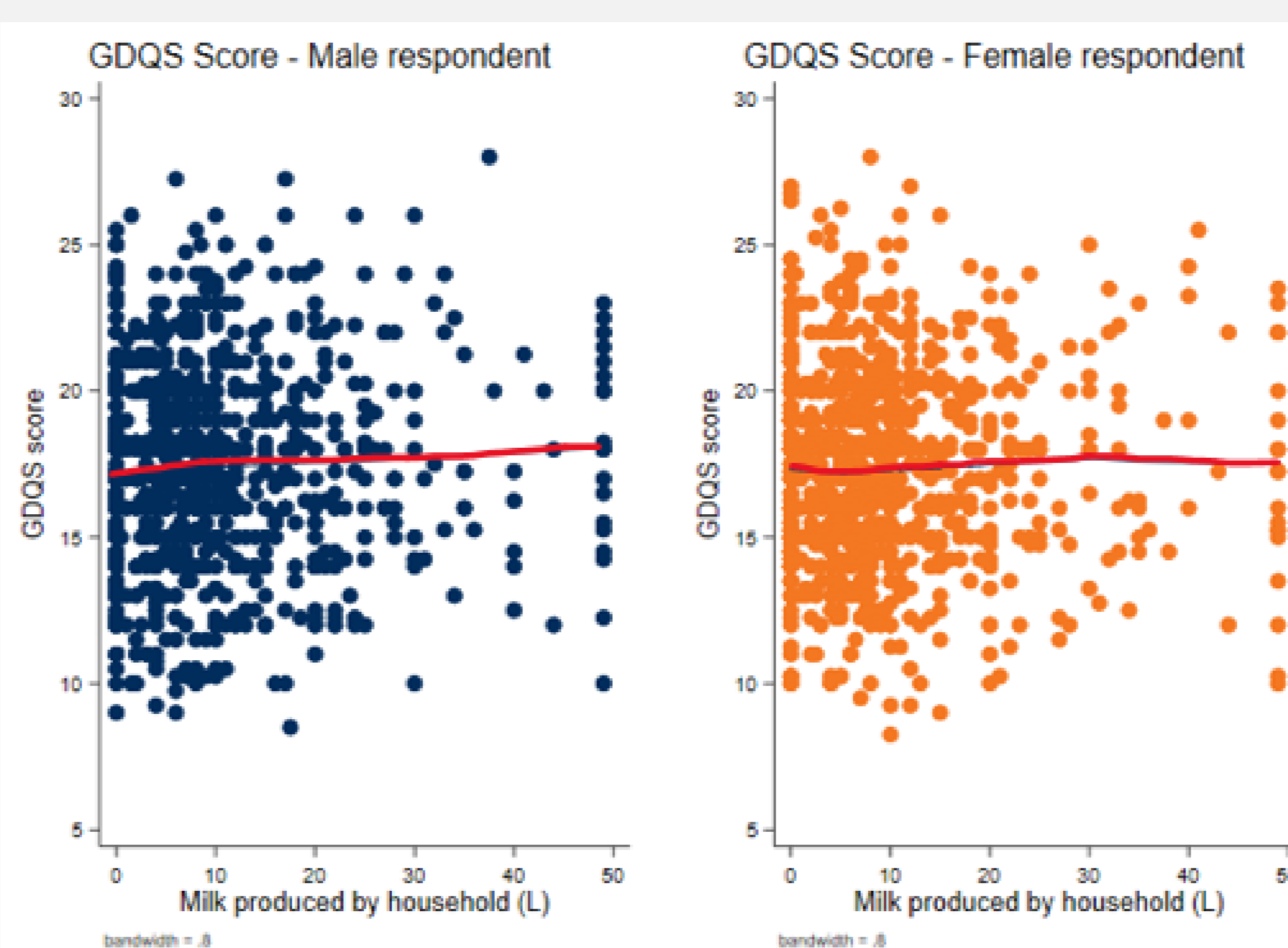
We used a mixed-methods design focused on small-scale dairy producers in Arusha, Kilimanjaro, Mbeya, and Tanga regions.

Our sample included households with TI3P loans (295) and without TI3P loans (848).

We conducted household surveys of 1,114 dairy-producing households, including 1,007 female and 950 male respondents, 20 FGDs, and 15 KIs.

We assessed dietary quality and dairy consumption using the Global Dietary Quality Score (GDQS), based on a 24-hour recall of 26 food groups.

Dairy production was reported as the average household daily production in the week before the survey.



How households spend income from dairy production?

Qualitative data suggests farmers primarily use income from milk production to support household needs and reinvest in dairy farming or other income-generating activities. They also use the income to purchase essentials such as cooking oil, salt, and tea rather than a variety of nutrient-dense foods.

What is the relationship between milk production and consumption?

Among men, each additional liter of milk produced was significantly associated with a small increase in GDQS (0.03 points); however, there was no association between milk production and GDQS among women.

"When we receive the milk money, we discuss maybe buying essentials like sugar, salt, soap, or children's notebooks, or paying for school fees and other expenses."

Man loan-holder farmer in Mbeya

"From the income of the milk, I have to share with my family so we can plan according to the money we have. For example, if I have earned one or two thousand and a hundred shillings, this amount should be allocated for cattle feed, and the remainder can be used at home for various needs."

Woman loan-holder in Kilimanjaro

Conclusion

Increased milk production alone is insufficient to meaningfully improve dietary quality.

Supplemental interventions, such as nutrition education, should be implemented alongside agricultural interventions to improve nutritional impact.



More about our work:



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