

Feasibility of a milk matters initiative to enhance milk intake in children over six months of age in Somalia

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The findings, interpretations and conclusions in this article are those of the authors. They do not necessarily represent the views of UNICEF, its executive directors, or the countries they represent and should not be attributed to them.

Location: *Somalia*

What we know: Pastoralist communities rely heavily on meat and milk for nutrition; seasonal availability varies, which may impact on intake.

What this article adds: A feasibility study was carried out in Hiran region of Somalia in 2016 to determine the viability of a 'milk matters' intervention in pastoral communities to enhance nutritional intake of children aged 6-23 months before and during lean seasons. Key learning areas include: the need to enhance milk production and consumption through maximising production during the lean season, prioritise empowerment of women (as key decision-makers on household consumption and use) and investment in the rearing of goats. Multi-sector engagement is essential, coupled with behaviour change communication. The expected benefits go beyond nutrition to include improved livestock production systems, improved access to income and improved community resilience.

Background

Countries in the Horn of Africa continue to face food security challenges¹. Pastoral and agro-pastoral communities relying on subsistence crop farming and livestock rearing as main sources of livelihood are the most affected. The nutrition situation in Somalia is one of the worst in the world, with a global acute malnutrition (GAM) prevalence of over 15%, which rises to 30% in some locations (classified as critical). The causes of malnutrition in Somalia are multiple, including poor infant and young child feeding (IYCF) practices, untreated sickness, food insecurity, poor water and sanitation practices and conflict. A quarter of Somalia's population is pastoral, with nomadic habits and reliance on meat and milk as major diet components. Dietary diversity is generally poor, reflecting the inadequacy of food access and availability, especially micronutrient-rich foods.

A feasibility study was carried out in Hiran region of Somalia in 2016² to determine the viability of a 'milk matters' intervention in pastoral communities aimed at enhancing the nutritional intake of children aged 6-23 months before and during lean seasons. A recent learning paper, summarised in this article, builds on these findings by analysing household patterns in livestock management, milk production, access and utilisation, milk handling, market chain and feeding practices in order to inform the milk matters initiative to maximise impact. The study also provides valuable information on the overall suitability and risks of implementing the project. It is intended to empower nutrition programme implementers in designing priority actions for nutrition-sensitive, resilience-building programmes, as well as defining key areas of investments.

Methods

Data were collected between March and August 2016² in three livelihood groups: pastoralists, agro-pastoralists and internally displaced persons (IDPs)/urban populations in Mataban and Beletwyene districts (where there are plans to implement the milk matters initiative in future, subject to the availability of funding). Twenty-eight key informant interviews were carried out with men and women in the communities, including leaders and milk traders. Sixteen focus group discussions were held with community members and 1,534 quantitative surveys were carried out with respondents from 767 households.

Results

Livelihoods and their management: Pastoralists relied on livestock production as their main source of income. One third (32.7%) of pastoralist and all (100%) agro-pastoralist households reported that they had land access; 44% of urban population respondents reported that they had some land, albeit in places far from where they were settled. Of the sampled households, 72.4% had goats, 41.2% had cows, 44.6% had camels and 23.8% had sheep. Results showed seasonal variability, with greater herd sizes in wet compared to dry seasons

¹ East Africa food security Outlook January to June 2018, and July to September 2018 www.fews.net/east-africa-

² <https://somalia.savethechildren.net/sites/somalia.savethechildren.net/files/library/MILK%20MATTERS%20FEASIBILITY%20STUDY%20%20FINAL.pdf>



A camel herder walks behind his herd near the town of Ainabo, Somalia, March 2017

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(23% difference), and greater availability of fodder in the wet season (60.3%) compared to dry (42.9%). Livestock management was found to be a male responsibility, while decisions on milk use were predominantly made by females in consultation with males, as reported in 75% of the surveyed households. In total, 64.2% of women were responsible for milk handling, storage and transportation to selling points. Pastoralists migrated with their herds (mainly cows and camels) during drought or seasonal stresses, leaving goats behind for milking purposes (75.9%).

Milk consumption: Across all three livelihood groups, consumption of milk is high during the high production season and low during the low production; hence production of milk is the main barrier to milk consumption and utilisation, as reflected in Figure 1. During the wet season (Gu), milk consumption was higher and milk provided a major source of income. Households consumed 41.8% and 27.8% of produced milk in wet and dry (Jilal) seasons respectively. More than half (52.3%) of pastoralists had milk surplus during the wet season, consumed by children

under five years in 80% of households. In 71.2% of the households, milk was added to vegetables, potatoes, water or tea before feeding children. In households with no livestock, an average of 0.56 litres was purchased daily in wet seasons, of which 0.38 litres was consumed by children aged 6-59 months (68%), compared to 0.5 litres of milk purchased daily by households with no livestock in the dry season (no significant difference between volume of milk bought between the two seasons ($P=0.547$)). Figure 1 compares patterns of milk utilisation between each of the three groups (pastoralists, agro-pastoralists and urban dwellers) in both regions.

Milk availability and management: Low milk availability was perceived to contribute to the poor nutrition status of children in 27.7% of households across the livelihoods. Communities generally perceive the benefits of animal milk in the prevention of malnutrition. Knowledge on optimal breastfeeding and complementary feeding was low (37.7% and 33.1% respectively). In 47.3% of households, milk was boiled for consumption and traditional methods such as

cold-water storage (28.6%), repeated boiling (56%), fermentation and mixing with traditional herbs were used to preserve unconsumed milk. Restricted access to markets, insecurity, seasonal floods, limited marketing skills, poor storage facilities and seasonal availability were factors limiting milk markets. Most small-scale traders were women (97.6%). Only 4.9% of the milk traders were engaged in milk production. In Hiran region a lack of companies processing and preserving milk was cited as a problem. Other than fermentation (35.1%), there were no other known milk products in the region, showing a limitation in value addition.

Key learning points

Livelihoods and their management

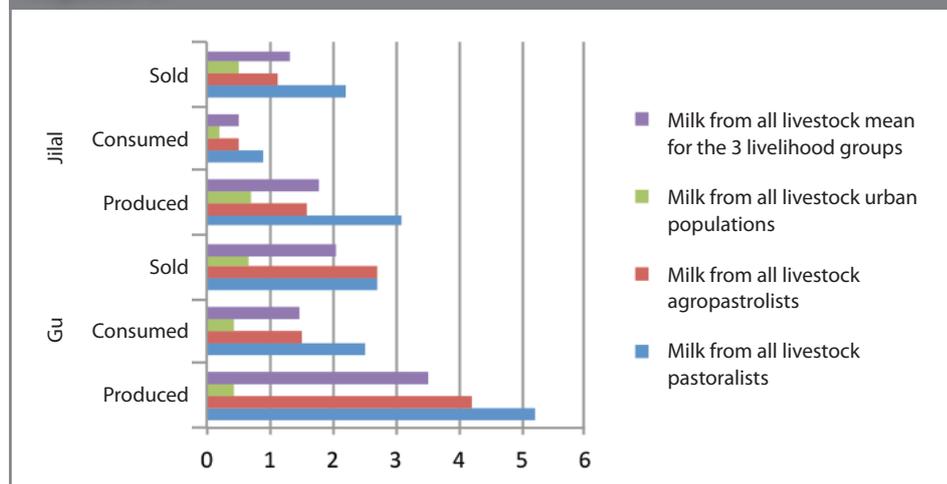
Results show good acceptability of milk among young children in pastoral and agro-pastoral communities and the use of milk to enhance household revenue; therefore investing in increased milk production and processing capabilities to ensure milk availability beyond the production season has the potential to increase milk consumption among young children and enhance household income. Advocacy is needed to reinforce multi-sector engagement – agriculture, water, sanitation and hygiene, health and nutrition – to enhance milk production and processing. Results show a clear preference for goats among pastoralists for both milk and meat, due to their relative affordability, taste of the meat and tolerance to drought and disease. Domestically, goats are also considered easier to keep at home by women due to their smaller size. Future programmes should therefore focus livestock investments on goats.

Women are the main decision-makers on milk utilisation in households; there is therefore great potential to mobilise women's groups for the improvement of milk production and enhanced nutrition status among children. While the focus is on women, engagement of the men in the programme is required to provide supportive roles for sustainability. The mobilisation of community groups, including men, for fodder management, water management, rangeland and environment management is essential.

Box 1 Proposed interventions

- Water availability
- Land use and fodder production
- Forage conservation/Crop residue management
- Fodder/Livestock health vouchers
- Supplementary feeding of livestock
- Breed improvement
- Balancing the livestock population and available feed resources
- Training of community animal health workers
- Improvements to the livestock and product marketing system through market linkages and infrastructure creation
- Trainings on milk hygiene practices
- Local supply of milk-handling equipment
- Nutrition education with a focus on optimal IYCF practices

Figure 1 Milk utilisation in the household 24 hours before the survey



Milk production

The high consumption of milk in Gu is attributed to high milk production in the households, low prices of milk and limited markets due to over-production. Milk production should be maximised during dry seasons and milk preservation should be maximised during wet seasons to support continuity of use. Possible basic interventions could include fodder and water management, support to quality veterinary services, and promotion of appropriate nutrition and IYCF practices. Pilot and scale-up should focus on pastoral and agro-pastoral communities, where incidence of livestock ownership is high and traditional practices recognise the importance of milk in enhancing nutrition among children. Further research is needed to determine the impact of the milk consumption on nutrition status.

Milk consumption by households and children

Milk is perceived to be an important food in the prevention of malnutrition in children and is used to enrich complementary foods for infants. Behaviour change communication (BCC) is needed that focuses on sustained production and milk consumption across the seasons, alongside the promotion of optimal complementary feeding. The availability of milk in the households

does not seem to influence breastfeeding patterns among mothers; rather breastfeeding is influenced by socio-cultural practices. The feasibility study did not provide information on milk consumption specifically among children aged 6-23 months and monitoring of milk intake for this category should be considered.

Milk availability and management

The study noted poor hygiene practices in milk handling and preservation. Improving hygiene and safety practices should be prioritised, alongside other water and sanitation-related interventions, such as establishing water catchment dams and underground tanks for water harvesting and developing boreholes at strategic points to boosting milk production. Such interventions will help tackle some of the underlying causes of malnutrition. Investment is also needed in the surveillance of milk availability, including monitoring; analysis of supply, market availability and price could also contribute to enhancing decisions about milk management.

Conclusion

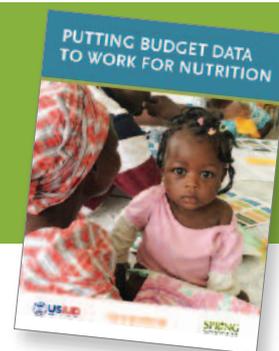
Focusing on milk production and processing during the wet season are effective strategies to address food access and improve child nutrition

intake in pastoral and agro-pastoral communities of Somalia. Key boosters to enhance milk production at household level are availability of pasture, land, water, animal breeds and veterinary services (see Box 1). The processing and optimisation of milk product availability beyond production time is also important and outlines the importance of food systems (supply of and demand for milk products) to enhance child nutrition intake and status in agro-pastoral areas, complemented by quality nutrition education on utilisation.

To maximise impact, milk matters interventions should aim to enhance milk production and processing during the wet season and should focus on building the capacity of communities in milk handling, increased production and preservation. Quality BCC strategies related to IYCF should also be implemented in conjunction. The expected benefits go beyond nutrition to include improved livestock production systems, improved access to income and improved community resilience.

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Putting budget data to work for nutrition Summary of research¹



Location: Global

What we know: There is a major global funding shortfall to meet malnutrition targets; accurate data on national nutrition budgets and spend is needed to inform decision-making and support accountability.

What this article adds: SPRING interviewed 25 key decision-makers in 11 countries to examine how budget data are currently used for decision-making at country level. Findings showed that data are used to identify and coordinate nutrition across sectors, advocate for more nutrition funding and track and manage use of funds. Analyses should be adapted to fit the country's needs involving an iterative, evolving and ideally regular and routine process. A range of stakeholders should be included to increase buy-in and findings should be targeted to specific audiences. Progress is being made at country level to analyse and nutrition budget and spending; however, it is essential that findings are shared with decision-makers and that they clearly identify gaps in spending and include district-level data to ensure that funding matches needs and translates into implementation.

Many actors have come together under the auspices of the Scaling Up Nutrition (SUN) Movement, the Millennium and Sustainable Development Goals (MDGs and SDGs) and other frameworks to address malnutrition. Achieving results requires adequate funding; however, estimates from the World Bank's Investing in Nutrition report suggest that the global com-

munity is seven billion dollars short of the funding necessary. Until recently, few nutrition actors could specify how much funding was allocated to nutrition. The lack of data on national nutrition budgets and spend meant that governments and implementing partners did not have accurate, up-to-date information on how nutrition was being prioritised or how well countries were spending their nutrition funds. The

SUN Movement, along with several donor-funded nutrition projects, have released guidance to help countries collect budget data and make an investment case. By the end of 2017, nearly 50 countries had analysed how much money had been budgeted for and some had gone further to track actual nutrition spending (Figure 1). To support this effort, SPRING gathered information and interviewed 25 key decision-makers in 11 countries, from ministry staff to local non-governmental organisations (NGOs), to learn more about country-level experiences using budget data for decision-making. These experiences were synthesised around three main questions.

How are findings from nutrition budget and expenditure analysis used?

First, nutrition budget and expenditure analysis served to identify and coordinate nutrition

¹ SPRING. 2018. *Putting Budget Data to Work for Nutrition*. Arlington, VA: Strengthening Partnerships, Results, and Innovations in Nutrition Globally (SPRING) project.