

Animal milk has long been recognized as an important component of pastoralist diets across the world (Sadler, Kerven et al. 2010). At the same time, milk is a nutrient-dense food and is known to contribute a high proportion of the nutrients, such as high quality protein and micronutrients. However, children who live in pastoralist areas of Africa are increasingly referred to as some of the most nutritionally vulnerable in the world and nutrition surveys in Eastern Ethiopia (SCUK 2007; Ethiopian Health and Nutrition Research Institute, UNICEF et al. 2009) and other pastoralist areas of Africa (Grobler-Tanner 2006; Mason, Cercone et al. 2008) have long identified seasonally high rates of acute malnutrition.

Seasonal variation in livestock milk production has also been well described in the literature on pastoralism in Africa, with milk supply falling as the dry season advances (Chell and Chell 1979; Arhem 1985; Catley 1999). The dominant nutrition response from the international aid community to malnutrition in these areas is often delivery of limited commodity food basket that rarely includes a protein or fatty acid source suitable for infants and young children. Despite acceptance of the urgent need for risk reduction and drought mitigation, there is still little understanding of which interventions in the medium to long term should be prioritized to improve the health and nutritional status of children in these settings.



Findings from a study carried out by the 'Milk Matters' project, a joint venture between Tufts University and Save the Children in Ethiopia present the impact of livestock intervention on nutrient intake in young children in pastoralists' areas of Ethiopia.

Livestock Intervention for Better Nutritional Status

In many pastoralist areas of Africa, child malnutrition peaks during the end of the long dry season as livestock milk supply dries up. When available, milk is prioritized for consumption by young children in Somali, Ethiopia. However, the seasonal lack of access to animals and animal products, exacerbated during periods of drought, is widely perceived by pastoralists as a primary factor behind child malnutrition.



The research by the 'Milk Matters', which examined the impact of livestock interventions on pastoralist children's consumption of

animal milk and their nutritional status during the late dry season of Ethiopia, attests the interventions have a highly positive impact on the nutritional status of young children.

The study utilized livestock interventions as factor to compare between intervention sites with non-intervention sites. Two livestock interventions were designed. In two of the four designated intervention sites (Waruf in Shinile and Biyoley in Liben), the milking animals were given a daily ration of supplementary feed over the dry season. In the other two intervention sites (Ayiliso in Shinile and Washaqabar in Liben), the milking animals were given a daily ration of supplementary feed plus a package of vaccinations and de-worming medications at the outset of the dry season. The two remaining sites were designated as control sites and received no intervention.

In order to also examine the impact of the intervention on nutrients intake in children and their nutritional status, children living in the chosen intervention sites were exposed to livestock interventions while children in the control sites were not. The Milk Matters' surveillance system followed all participating children in intervention and control sites on a monthly basis for one calendar year, June 2010 to June 2011.

The interventions measured up in terms of milk off-take, milk availability and nutrition status of children in the selected areas has demonstrated that through targeted livestock support to milking animals that stay close to women and children during dry season and/or drought, milk production and consumption among children is improved, and their nutritional status benefits.

At present, the humanitarian community is said to spend much more time before humanitarian disasters preparing to treat acute malnutrition rather than trying to prevent it (Levine and Chastre 2011). The interventions presented in this study provide us with the opportunity to change this focus and reconnect food security interventions and nutrition outcomes in these areas with the potential of creating substantial aid cost savings by preventing the need for large Community- Based Management of Acute Malnutrition programs.

Main Findings

- Milk availability improved in intervention sites.
- Milk consumption by young children improved in the intervention sites.
- Overall, nutritional status of children receiving milk stabilized over the dry season.
- The cost of the interventions was significantly less than therapeutic feeding programs.

This study also found out several positive livelihood outcomes of the livestock intervention for participating households. One is the intervention helped women enjoy more free time as a result

of reduced workload. In addition, it positively impacted pastoralist livelihoods by protecting their critical assets during drought conditions.

Key Recommendations

This study suggests a shift from the prevailing nutrition response of attempting to treat acute malnutrition with child feeding programs to a more preventive response through interventions such as this, which focused nutrition outcomes.

Nutrition Sensitive Intervention

- Support for preservation of milk surplus during the rainy season and, where appropriate, community-level feed production/storage under the drought preparedness stage.
- Focusing animal health and feeding interventions on the reproductive/milking stock during the mitigation stage.
- Ensuring that public works or cash/food-for-work activities do not impact negatively on women's time and abilities to maintain their own or their children's nutritional status during the reconstruction stage.

In order to build the evidence in this research base on the potential for nutrition benefits of interventions such as those implemented under this study, food security and livelihood programs must start monitoring more systematically their impact on nutrition outcomes using simple tools for measuring nutrition impact such as participatory impact assessment and dietary index.

Future efforts on this type of nutrition sensitive intervention are likely to keep children living in low livestock resource settings from becoming malnourished, the evidence from which policymakers should make rationale choice.

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The full report can be found from: <http://sites.tufts.edu/feinstein/2012/milk-matters>

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