

# 2017 3I Awards



## INNOVATION | IMPACT | INFLUENCE

Please complete this table with your information:

<b>Category</b> <i>Impact, influence or innovation</i>	Innovation
<b>Title of Submission</b> <i>Descriptive title that summarizes the initiative</i>	Got Milk? Uganda livestock pilot proves that up front investments have long-term gains.
<b>Full name and title of each team member</b>	Bob Mullen, Livestock Advisor; Tracy Mitchell, Chief of Party; Maureen Kamusiime, Livestock Team
<b>Country, program and/or department</b>	Uganda, Northern Karamoja Growth, Health and Governance Program, Livestock Pilot Team.
<b>Main point person and email for the submission</b>	Elizabeth Robertson, <a href="mailto:erobertson@mercycorps.org">erobertson@mercycorps.org</a>

### Intake Questions: please respond below.

This information is requested so that, should your entry be selected as a finalist, we can begin to work with you right away on developing your video clip. Your responses here will NOT affect how your submission is evaluated.

What equipment does your office have available which could be used to film your initiative? Highlight all that apply.	c. Digital camera with video option
Is there someone in your country office who is knowledgeable about basic photography and video technology? Would this person be available to be a point of contact for HQ, to help with the video?	Deusdedit Lutwama, <a href="mailto:dlutwama@mercycorps.org">dlutwama@mercycorps.org</a>  He will be available to be point of contact. GHG also trained several team members on how to make videos late 2016.
What would be the most reliable, efficient way for your office to share video with HQ? Highlight all that apply.	a. Upload your video to Google Drive
What is the speed of your internet connection? You can test your internet speed at <a href="http://www.speedtest.net">www.speedtest.net</a> . Please let us know your upload speed in Mbps.	Download: 1.34 Mbps, Upload: 1.55 Mbps

**Executive Summary:** Pastoralism is the primary livelihood strategy in Karamoja. As pastoralists, local livestock owners rely on the rainy season or areas less affected by the prolonged period of dryness to graze their cattle. Traditionally in Karamoja, supplemental feeding of livestock is not practiced, resulting in poor milk production, low household consumption and reduced income during this time of the year. Furthermore, 50% of the population is food insecure and 12% is severely food insecure<sup>1</sup>. Within Mercy Corps' Growth Health and Governance (GHG) program, through a control trial with two interventions, the team discovered that following one of two simple supplemental feeding programs for livestock could enhance household's net incomes by 310% and 208% respectively. This also has implications for the rest of the Karamoja region and household nutritional welfare, reducing malnutrition for children less than 5 years of age.

**Context:** Pastoralism is still very active in the Karamoja region. As pastoralists, communities rely on the rainy season or migration to areas less affected by periodic drought to graze their cattle. During the rainy season, ample amounts of natural and nutritional grasses cover the area and grazing is restricted to areas close to the pastoralist homes. The harvesting and storage of grass during times of plenty is not practiced in Karamoja and, as the grasslands dry up, livestock owners migrate in search of viable pasture. At the same time, malnutrition and food insecurity remain high. This means that any gains in the production of milk and income generated from increased milk production can have large impacts to the wellbeing of the Karamojong.

The livestock intervention, as part of the GHG program, addresses some of the food security challenges among households in Northern Karamoja. The overall goal of the GHG program is to improve food security and resilience of the people living in Karamoja.

**Initiative:** In Karamoja, during the dry season, lactating cows, calves, and sick and weak animals remain at the manyattas (local houses) during the migration process. The lactating cows feed on dry grass that offer very little nutritional value and have limited water resources, resulting in very little or no milk for calves and domestic consumption. The pilot team became curious around what could happen if they focus on enhancing the nutrition of these animals during this time of year. The team conducted a 30 day feed supplement trial centered on fodder, mineral supplements and additional feed nutrients. The trial was conducted from December 2016 to January 2017, a time when the grasses are usually green, but since the rainy season ended early in 2016, the beneficial grazing lands were nominal. The study included three separate groups comprised of two lactating zebu cattle each, with the third study group acting as the control. The control group received no additional feed supplements and the animals subsisted on the natural dry grasses in the local grazing area of the household.

Lactating animals of group one were given hay, 1.5 liters of liquid molasses per day, locally produced mineral blocks made of bone meal, salt and local binding ingredients and water. Lactating animals of group two were given hay, 3 kilograms local brewer's yeast (a sorghum bi-product from locally produced alcohol for human consumption), locally produced mineral blocks

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<sup>1</sup> Karamoja: Food and Security Assessment, 2016. World Food Programme. < <https://www.wfp.org/content/uganda-karamoja-food-security-and-nutrition-assessment-july-2016>>

and water. Animals of group three continued the normal daily grazing pattern close to their home village on sparse pastures.

**Results:** The initial milk production amounts by all the trial animals were recorded at the start of the trial with daily milk production (morning and evening) records maintained for the 30 day period of the pilot. Study groups one and two benefited from the feed supplements provided in the trial. Each group quickly exceeded the production of group three (the control). On the 29<sup>th</sup> day, Group one had an average increase in daily milk by 132% (9.3 cups of milk per day), while group two had an average increase by 15 % (6.9 cups). Group three maintained the accepted local average of 2.5 cups per day. With an extension of the trial, the milk production would potentially maintain or slightly reach above the day 29 measurement.

Using the data collected on milk sales per participant and deductions for expenses (net gains) the cost benefit analysis for each of the groups is shown in the below table in US Dollars<sup>2</sup> clearly showing the additional investments made are paying off. Group one, taking the group three as a baseline, increased their daily average net gain by 23.67 %. The overall net gain and impact becomes even bigger if the nutritional benefits for family members - especially children less than 5 years of age - as well as the livestock, would be reflected within the cost benefit analysis.

#### **Cost Benefit Analysis of Supplemental Feeding**

Item	Group One		Group Two		Group Three	
	Dollars	% increase	Dollars	% increase	Dollars	% increase
<b>Period of 29 days</b>						
Daily average cost supplemental feeding (1.5 liters molasses, hay, mineral block supplement and other associated costs)	USD 0.76	<b>57.58%</b>	USD 0.48	<b>18.83%</b>	USD 0.14	baseline
Average income	USD 1.34	<b>109.37%</b>	USD 0.97	<b>62.98%</b>	USD 0.33	baseline
<b>Daily average net gain</b>	<b>USD 0.57</b>	<b>23.67%</b>	<b>USD 0.48</b>	<b>8.42%</b>	<b>USD 0.19</b>	<b>baseline</b>

**Learning:** Although limited by time, this trial did produce valuable insight into the benefits of feed supplementation to livestock. Given proper conditions to include the harvest of viable protein rich grasses and additional micro and macro nutrients of locally made mineral licks, animal health and conditioning and a noticeable increase in milk production is highly viable. In conclusion, as can be observed from the trial, the introduction of feed supplements will increase household income. Aside from the economic value to the household, it can be assumed that with proper animal health and management, animal body weight will increase, additional milk will be available for young livestock allowing these animals to develop stronger and with the better-conditioned animals, market prices will increase. This evidence will be helpful in informing future program interventions, not only for Mercy Corps but for USAID's implementing partners across Karamoja and other semi-arid pastoral regions to replicate this innovation. Furthermore, it revealed that within an existing system, innovation can be lifted out and leveraged when working closely with the community and a systemic approach, easily replicable for other livestock programs.

<sup>2</sup> Exchange rate at 1 USD = 3,589 UGX