


Livestock marketing and gendered decision-making in Karamoja, Uganda

A FEINSTEIN INTERNATIONAL CENTER BRIEF 

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Cover photo: Julius Lwegaba

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Key Messages

- Karamoja is experiencing significant societal change and development, which is translating into greater market involvement by and decision-making power for women. Programs need to take advantage of this transformation and invest in market and financial literacy courses for women.
- Greater livestock wealth within a household is associated with lower market decision-making power for women, and thus programming around female engagement in livestock markets requires additional effort and sensitivity.
- Livestock ownership is highly unequal in Karamoja, with a small minority of households owning and having the capacity to invest in large herds of livestock. Programs that support livestock systems need to provide added support to less well-off households or risk exacerbating existing inequalities.

Introduction and overview

This briefing paper explores the study population's involvement with markets and gendered decision-making in the Ugandan sub-region of Karamoja. This is one of four briefing papers based on research on changes in the region and youth livelihoods conducted in 2019. The other three papers address youth access and engagement with savings and credit mechanisms, youth innovations, and youth responses to major life events. These findings are part of the Apolou Activity. Apolou is made possible by the support of the American people through the United States Agency for International Development (USAID) and is implemented by Mercy Corps and partners. The Feinstein International Center, Friedman School of Nutrition Science and Policy at Tufts University is the research and learning

partner for Apolou. The mixed-methods research seeks to understand the ways in which market expansion, including increased commoditization and monetization, have (or have not) provided opportunities for the population. We seek to understand the ways in which households and young people (from late adolescence to late 20s) not only cope with shocks and chronic vulnerability, but also take advantage of emerging opportunities. The longitudinal approach entails interviewing the same households and cohort of individuals each year, which allows for an in-depth understanding of change over time. This design allows the research team to explore the engagement of the population in livelihood activities, decision-making, and market interaction.

Methodology

We used a randomized cluster sample across 52 villages (10 households per village) within four districts in two time periods (October/November 2018 and October/November 2019), resulting in a sample size of 521 households in 2018 and 488 households in 2019. The same households and, importantly, respondents were interviewed in each of the two time periods. To take advantage of the panel nature (i.e., interviewing the same people at multiple intervals) of the study design, we use both random and fixed effects models in the analysis. This use of both types of models allows us to observe how household- and respondent-level characteristics are

correlated to outcomes (random effects model), as well as how changes in certain characteristics might affect changes in outcomes (fixed effects model). Finally, we explore how baseline characteristics of respondents and households might affect their midline outcomes. Only relationships with a p-value¹ of less than 0.05 are marked as significant.

The sample size by district and time is shown in Table 1. We refer to the 2018 survey as the baseline and the 2019 survey as the midline. A third and final wave of data collection is planned for October/November 2021.

Table 1. Sample size by district and time

District	Baseline (2018)		Midline (2019)	
	Frequency	Percent	Frequency	Percent
Amudat	172	33%	153	31%
Kaabong	120	23%	112	23%
Kotido	139	27%	132	27%
Moroto	90	17%	91	19%
Total	521	100%	488	100%

Key findings

This briefing paper discusses findings around two key aspects related to markets that emerge from the comparison of the baseline and midline quantitative data. We discuss shifts in market access and decision-making at the market by gender. We then examine the ways in which the purchase and sale of livestock across the two time periods do or do not change over time and the association with different types of wealth. But first, we briefly recall key findings from the baseline study to better describe the existing landscape of wealth in Karamoja, as well as the construction of the two wealth variables—

farm- and animal-related wealth—that we use throughout the study.

Baseline review

In the first round of data collection (the baseline in 2018), we wanted to better understand household characteristics, particularly in relation to wealth. The midline (2019), on the other hand, is more focused on how change over time in key market interactions, particularly around the sale and purchase of livestock, is associated with those initial household wealth profiles.

¹ The **p-value** is the probability of finding the observed difference if the observed difference did not actually exist; thus, the smaller the p-value, the more significant the difference. For example, when we show that the p-value is 0.01 or 1%, it means that 1% of the time the relationship you are seeing is by chance; if the p-value is 0.05 or 5%, it means that 5% of the time the relationship you are seeing is by chance, and so on. Thus, we are more confident that a relationship exists when the p-value is small. For our analysis, we use a cut-off of 5% and only call a relationship significant if there is a 5% chance or less that the relationship is due to randomness or chance.

The baseline data highlighted the importance of livestock in the sampled communities, with the majority of households reporting owning some type of animal. However, the distribution of that ownership was extremely skewed, while ownership of non-livestock and physical assets was far more evenly distributed. For example, we found that half of the households hold 90% of the livestock reported in the data. This finding means that while most respondents do own livestock, the majority of livestock wealth is concentrated in only a handful of households. As we see in the midline study, this inequality continued to be reflected in a household's ability to take part in existing livestock markets.

A key component of the analysis was to unpack the multiple proxies of household wealth from collected data (including livestock ownership, asset ownership, and expenditure). To do so, we used an approach called principal component analysis (PCA), which allows us to see how different aspects of wealth cluster together. PCA identified two main clusters of wealth variables among the sampled population. The first cluster was primarily around livestock-related wealth: owning cattle, sheep, goats, and oxen; higher expenditure on livestock-related products and medicine; but less ownership of physical assets. Thus, we call this measure "livestock-related wealth." The second variable, called "farm-related wealth," captures ownership of physical asset wealth, such as radios, wheelbarrows, mattresses; less livestock ownership, particularly large ruminants; and higher expenditure on agricultural inputs. We use both of these measures in our midline analysis discussed below. For more detailed information on how these two wealth indices were constructed, please see the Baseline report, available at <https://fic.tufts.edu/publication-item/apolou-baseline-report-household-wealth-and-market-quality/>.

Market access and decision-making at the market by gender

Main messages:

- Women's role around market decision-making in Karamoja is increasing. However, men still continue to make approximately half of all purchasing decisions.
- The more wealth a household has in terms of livestock, indicating a more pastoral livelihood, the less market decision-making power a women has, as reported by the male household head.
- Improvements in wealth over time, whether farm- or livestock-based, do not translate into greater market decision-making power.

To better understand how growth in markets, changes in livelihoods, and possible market interventions might influence existing gender dynamics, we looked at who goes to the market and who makes decisions about purchases at the market. Hence, in the first two rounds of the quantitative survey we asked respondents the following questions:

- Who in the household is accessing the market?
- Who usually decides what to buy at the market?

When comparing the population as a whole across the two time periods, we found that the proportion of men who said that their female spouse goes to the market significantly increased from 54% (CI: 48–60%)² at the baseline to 77% (CI: 72–83%) at the midline. The proportion of female respondents who said their male spouse goes to the market declined (from 56% to 49%), but this decline was not statistically significant. In addition, the number of male respondents who reported that their female spouse usually makes decisions about what to buy

² The confidence interval (CI) tells us that there is a 95% probability that the population mean falls between the two specified values.

at the market increased significantly, from 60% at the baseline (CI: 54–66%) to 77% at the midline (CI: 72–83%). Importantly, female respondents reported change in the same direction. While 60% (CI: 54–66%) of female respondents at the baseline said that their male spouse makes purchasing decisions, this percentage significantly declined to 47% at the midline. Thus, we find that on average over time, women’s role around market decision-making in Karamoja is increasing; however, within the sample, men still continue to make approximately half of all purchasing decisions. These findings have implications for program targeting around market interventions and point to the importance of including both genders in programming and discussions.

However, the reported increase in market access and decision-making power in regard to market purchases for women was not uniform across the study population. We looked at two types of wealth: farm-related wealth and animal-related wealth. There was no relationship between farm wealth and female decision-making, meaning greater ownership of farm-related assets did not translate into greater (or fewer) decisions made by women. On the other hand, the greater the animal wealth of the household, the significantly less likely the male respondent was to report that his female spouse went to the market. These patterns held true for decision-making in markets as well as market visits: the greater the animal wealth of the household, the significantly less likely the male respondent was to report that his female spouse made decisions about what to buy in the market. (Interestingly, there was no observed relationship between animal wealth and decision-making when the question was asked of female respondents, indicating that perceptions around decision-making differ by gender of the respondent.) Households characterized by animal wealth are more likely to pursue pastoral livelihoods, and these findings imply that decision-making around livestock (including purchase and sale) remains largely in the hands of men. Feedback from the dissemination events highlighted some of the reasons for the limited shared decision-making between men and women around livestock. Women already have a heavy workload and thus do not have enough time to engage in livestock marketing or travel the long distances required to reach a livestock

market. The data also show that changes in wealth (both animal and farm) do not have any effect on gendered market-based decision-making, further indicating the link between this trend and livestock-related livelihood specializations.

Purchase and sale of livestock

Main messages:

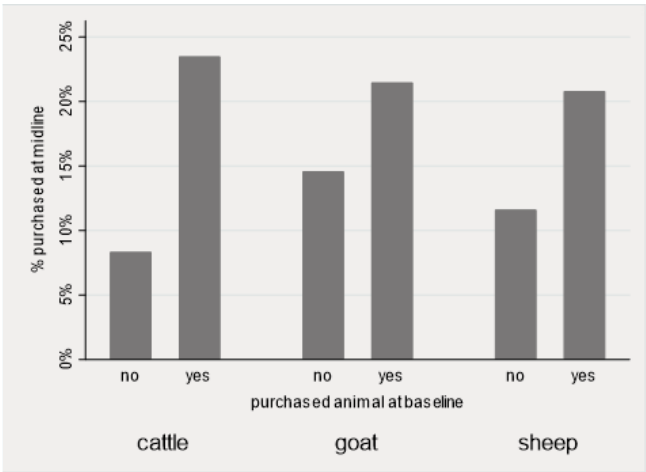
- Investment and trade in livestock are strongly correlated with existing animal wealth. Given the prevailing inequality in animal wealth in Karamoja, programs around livestock marketing might primarily benefit the already better-off households.
- As households invest in farm-related assets, their investment in livestock, with the exception of goats, declines.
- While there are a myriad of possible reasons, ranging from cultural to greater stability, there is evidence of a livelihood transition from livestock to farming and trade in Amudat.

Livestock purchase

In seeking to understand the intersection between market engagement and household livelihood strategies, we examined purchases of three different types of livestock (cattle, goats, and sheep) at the 2018 baseline and the 2019 midline quantitative data collections. There was no significant difference across time in the purchase of any of the three livestock types. Households were the most likely to purchase goats, followed by cattle, and then sheep. Although not statistically significant, the data indicate a downward trend in purchasing of goats and cattle, and consistent purchases of sheep. At the baseline, 20% (CI: 17–24%) of all households reported having purchased a goat, compared to 17% (CI: 13–20%) at the midline. For cattle, approximately 16% (CI: 13–19%) of households reported purchasing cattle at the baseline, compared to 13% (CI: 10–16%) of households who reported purchasing cattle in the midline. And 14% of households (CI: 11–17%) purchased sheep across both time periods.

For all livestock, purchase at the baseline was strongly and significantly correlated with purchase at the midline (Figure 1). This means that those households who purchased animals in the first time period were the most likely to report purchasing animals again in the second time period. This association was strongest for sheep, followed by cattle, and then goats, with sheep ownership the most consistent across time.³

Figure 1. Relationship between baseline and midline purchase by type of livestock.

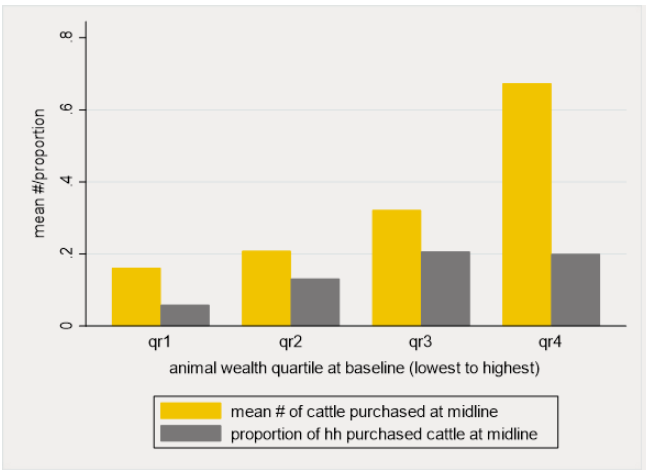


Overall we saw no significant change over time in livestock purchases for the population as a whole, though there were some differences when comparing across districts. Households in Amudat were more likely to report purchasing cattle and goats across both time periods; however, Amudat was also the only district that experienced a decline in purchases of these animals between the baseline and midline. Households in Amudat had the greatest (but not significant, $p\text{-value} = 0.08$) decline in cattle purchases between the two time periods, from 23% (CI: 17–30%) to 16% (CI: 10–21%), and a significant decline in the proportion of households who reported purchasing a goat. Households in Kaabong were the most likely to report sheep purchase across both

time periods, but there was no change over time in sheep purchases in Kaabong or any other district.

Given the expansion of markets and the focus of donor funding and programming around market interventions in Karamoja, we wanted to better understand how the purchase of livestock was associated with household wealth, to inform who might benefit the most from these interventions and who might lose out. We find that households with greater animal wealth were significantly more likely to purchase cattle, while farm wealth had no relationship with cattle purchases. In the same vein, if animal wealth increased so did the purchase of cattle, while an increase in farm wealth was correlated with a *decrease* in the probability that a household would purchase cattle. This finding implies that households who are putting more investment into farming assets have decreased their investments in cattle.

Figure 2. Cattle purchase at the midline by animal wealth quartile at the baseline.⁴



Thus, we find that cattle purchase and changes in cattle purchase are the most dependent on existing animal-related wealth. Even more telling is the relationship between baseline levels of wealth and

³ Almost one-third of households who purchased sheep at the baseline reported purchasing them again at the midline. On the other hand, only 12% of households who did not purchase sheep at the baseline reported purchasing sheep at the midline. While not a perfect overlap, approximately a quarter of households who reported purchasing cattle at the baseline did so again at the endline. Of households who did not report that they purchased cattle at the baseline, only 10% reported that they purchased cattle at the midline. Similar to cattle and sheep, approximately a quarter of households who purchased a goat at the baseline also purchased one at the midline, compared to 15% of households who did not purchase any goats at the baseline reporting purchasing at least one goat at the midline.

⁴ In Figure 2, “hh” stands for “household” and “qr” stands for “wealth quartile.”

cattle purchase at the midline. The higher the animal wealth at the baseline, the significantly more likely that the household purchased cattle at the midline (Figure 2). There is no such relationship with our farm wealth proxy. For example, we find that 6% (CI: 1–12%) of households in the bottom quartile (i.e., bottom 25%) of animal wealth at the baseline purchased cattle at the midline, compared to 20% (CI: 12–28%) of households who were in the top quartile (i.e., top 25%) of animal wealth at the baseline. The same relationship was not observed with either goats or sheep. Thus, it is evident in the data that cattle purchasing is primarily the purview of the households with the greatest animal wealth to start with. When combined with the finding (discussed above) that the same households were buying livestock at the baseline and midline, we see that households who lack animal-related wealth to start with may be locked out of animal purchases, particularly cattle, later on. The clustering of purchases in only a few already wealthy households, coupled with the existing livestock inequality, has important implications for livestock-related market programming. Such programs are primarily benefitting those who are better off and already own livestock.

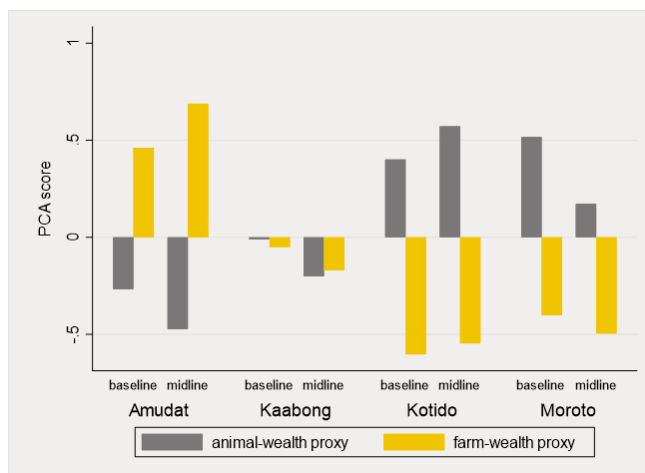
Interestingly, unlike for cattle, both farm and animal wealth were associated with the purchase of goats. (For sheep, only animal wealth was associated with their purchase.) The more wealth in either category for a given household, the greater the likelihood that they purchased a goat across the two time periods. The findings around goats indicate that these are valuable animals for both farmers and pastoralists, likely both as a source of milk and an investment. Goats can be quickly and readily sold when a household needs cash to buy cereals, access medical treatment, or pay school fees. In addition, unlike cattle, women often have more control and influence over the purchase and sale of goats. These findings around goats indicate that livestock and market interventions that focus on goats may benefit households with both farm- and animal-related wealth, both better off and poorer, and both men and women.

Livestock sale

Approximately 62% (CI: 54–70%) of households reported selling some kind of livestock in the 12 months prior to the baseline. The figure did not significantly change at the midline, with 65% (CI: 58–72%) of households reporting selling livestock in the 12 months since the baseline. When disaggregated by type of animal and season of sale, however, households were significantly more likely to report having sold cattle during the dry season in the 12 months prior to the midline (31%, CI: 27–35%), compared to any dry-season cattle sales in the 12 months prior to the baseline (23%, CI: 20–27%). There was no significant difference in the sale of cattle in the wet season, the sale of sheep, or the sale of goats over time.

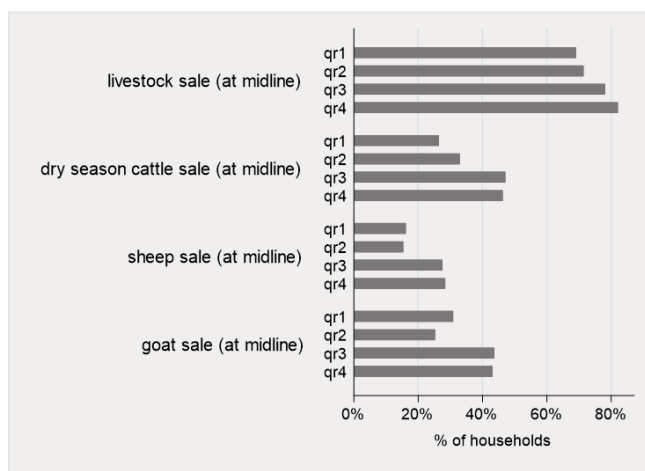
Over 80% of all households in Amudat reported selling livestock in both time periods. The proportion of households selling livestock in Amudat was significantly higher than in any of the other districts, which remained below 65% across both time periods. Households in Amudat have significantly less animal-related wealth compared to Kotido and Moroto, but significantly more farm-related wealth (Figure 3: the higher the PCA score, the greater the wealth; the lower the score, the lower the wealth). There are several reasons why households in Amudat might be more likely to engage in livestock sales and have more farm-related wealth compared to the other districts. Given Amudat's geographic location on the border with Kenya, households have access to both Ugandan and Kenyan livestock markets. In addition, the Pokot view livestock as a business commodity and thus are more likely to sell off livestock and invest in other enterprises such as buildings and trade, as opposed to restocking. Stability also plays a role, with Amudat being relatively free from cattle raids in recent years. Finally, there was a foot and mouth disease quarantine in Kotido and Moroto in 2019 that restricted livestock movements and thus likely depressed livestock sales. An increase in sales was observed in Kaabong, Kotido, and Moroto, but it was not statistically significant.

Figure 3. Animal- and farm-related wealth by district and time.



As with livestock purchases, livestock sales at the midline were correlated with livestock sales at the baseline ($p < 0.01$). In other words, households who had sold animals in the year prior to the baseline were the most likely to report having also sold animals in the year prior to the midline. This was the case for cattle sales in the dry season, sheep sales, and goat sales, but there was no significant relationship between sale of cattle in the wet season at the baseline and midline.

Figure 4. Livestock, cattle, sheep, and goat sales at the midline in relation to animal wealth quartile at the baseline.



Also, similar to purchases, some sales of livestock were associated with wealth. Overall, households with greater animal wealth, but not farm wealth, were significantly more likely to report selling livestock. Interestingly, an increase in animal wealth was also associated with sales of animals. This finding implies that those households with greater animal wealth were more likely to be engaged in animal trade. (There was no relationship between changes in farm wealth and animal sales.) Sale of cattle in the wet and dry season was significantly correlated with animal wealth and changes in animal wealth—though we do find that wet-season cattle sales were carried out by households with greater farm wealth as well. Sheep and goat sales were also associated with animal wealth, but not with changes in wealth.

In particular, we find that animal wealth at the baseline is significantly associated with sale of livestock at the midline, including cattle in the dry season, sheep sales, and goat sales. Thus, similar to purchase, **the sale of most livestock is done primarily by households who already have a high level of animal-related wealth** (Figure 4) and are the most likely to be engaged in animal marketing. This finding has important implications for how we think about the role of markets in Karamoja, including who is using them and benefitting from them.

Recommendations and implications

Key messages:

- Women's decision-making around markets is increasing as part of the overall transformation in Karamoja, and thus programs that assist women in developing financial literacy, promote savings and investment, and teach marketable skills are extremely timely.
- Programs that support female market engagement and literacy require greater investment and sensitivity in primarily pastoral households, given the strong association between greater livestock ownership and lower female market decision-making due to preexisting cultural norms.
- Engagement in livestock markets is primarily the purview of already livestock-wealthy households; thus market interventions will have to more directly engage and support less well-off households so as not to exacerbate the already high wealth inequality in Karamoja.

Karamoja has experienced significant societal change in the past two decades, coming out of a period of prolonged internal conflict and the loss of large numbers of animals under the protected kraal system that accompanied the forced disarmament program. However, the disarmament campaign also greatly improved security, allowing livelihoods to expand and diversify, trade to resume, and markets to flourish. This period of rapid transformation has not only greatly increased commodification and monetization, but also has brought profound shifts in pastoral and agro-pastoral identities, culture, and gender norms. The impacts of these changes and shifts and how they vary by community, household, and gender are not well understood. One underlying assumption is that the continuing market expansion is improving household well-being; many donors and development actors have designed programs based on these assumptions. The learning agenda led by Feinstein as part of Apolou seeks to unpack this

assumption by providing evidence on the impacts of the economic and social transformation within Karamoja. This briefing paper provides a timely preview of who might be benefiting, and who might be being left behind in regard to market access in the sub-region.

When comparing the baseline to the midline, **women appear to be making more decisions about purchases and to be going to the market more often.** While the data do not indicate why this is the case, we hypothesize that it is likely related to the continued increase in security, access, and resulting market expansion that is ongoing in Karamoja and its potential impact on traditional female roles. However, this finding will need to be further explored and evaluated in the endline quantitative and ongoing qualitative data collection. **Given what is known, programs that assist women in developing financial literacy, promote savings and investments, and teach marketable skills are poised to be successful and may help catalyze this trend.**

As important as the observed trend over time in female decision-making is, there are key differences in gendered decision-making power between households. **We find that the more animal wealth a household has, the less the market decision-making power of the women in the household.** While this may be because men are more likely to control animal wealth and decisions around livestock purchase and sale, we hypothesize that there is a ripple effect that extends to market decisions beyond animals. In other words, women in households with higher animal wealth are likely to have less influence over market decisions that do not involve livestock. Additional research would be required to understand the extent to which these gendered patterns extend to decisions unrelated to markets.

An understanding of the impacts of these cultural and social differences is important for stakeholders designing programs to expand markets, access for women to markets, female entrepreneurship, and female access to financial products. Taking these differences into account, program design

and targeting might need to differ for traditionally pastoral versus agricultural households. **The cultural roles of women and the decision-making areas that they do and do not have influence over will need to be taken into account to ensure maximum positive impact. In particular, programmers should be aware that advances for female involvement in decision-making may take more time and effort in pastoral areas, and that there is a potential of program benefits disproportionately benefitting men.**

However, these are preliminary findings and require further exploration to draw any strong conclusions and associated programming implications.

From the baseline study we learned that animal ownership and wealth (across all measures) is highly unequal, with half of the population owning only 10% of all reported livestock. This shows that the majority of livestock ownership is concentrated in a handful of households. At the midline we were able to take a deeper dive into how animal-related wealth relates to engagement in livestock marketing. We found that both the sale and purchase of livestock is primarily the purview of households who already have high levels of animal ownership. This association (between animal wealth and purchase or sale of animals) is the strongest for cattle, followed by sheep, and lastly by goats (Figure 1). This finding has important implications for market-related interventions undertaken by national and international stakeholders. **As the better-off are the most likely to engage in sale and purchase of animals, it is this population that will benefit the most from market support. Hence, market interventions and support should take into account**

how greater engagement can occur with less-wealthy households. Without such efforts, programs based on livestock marketing could potentially further exacerbate existing inequalities around animal ownership in the region.

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